The Builder.

No. CXLIX.

SATURDAY, DECEMBER 13, 1845.

THE announcement of the proposed revision of the Buildings Act, has brought us a flood of letters complaining of its operation. With some trifling exceptions, however, the cases set forth relate to the administration of it rather than to the Act itself, and several of the letters apply wholly to the proceedings of one or two district surveyors only.

We are never willing to find fault, and would at any time step a little way out of the path of strict duty, to avoid hurting the feelings of a professional brother. Our object in alluding to one or two instances of unwise conduct on the part of district surveyors, at the present moment, is to induce those who are deputed to see the Act carried out, to "do their spiriting gently," and not by an avaricious grasping after fees, to increase still further the feeling of disapprobation which has been engendered. If they would consider for a moment, as we well know a large number of the body do, that they hold their office for the protection of the public, and not for their own personal advantage, their course of action would often be different from what it is. The Act is not put into an officer's hands simply that he may find occasions to demand a fee, but that he may see its provisions for the general good (often opposed to private interests), honestly carried out; provision is made in it to pay him fairly for all he does, but any thing beyond this he ought not to look for; and what is more, *must* not. To return to the letters before us.

The first we take up reproaches us in strong terms, for omitting to draw attention to an information laid by Mr. C. R. Badger against Mr. Barnes, for having "made certain additions to projections" from a house situate on a plot of back-ground in the Lewisham-road, contrary to the Act. Mr. Barnes shewed that the works complained of were commenced before the first of January last. Truth to say, the award of the referees on this matter was before us (*every* award comes before us), but having had occasion to comment on the proceedings of this gentleman, of "Lamb and Lion" notoriety, some time ago, we were led to delay noticing it. Suffice it to mention, the referees decided there was no ground for bringing the case before them, and marked their sense of the proceeding by making Mr. Badger pay the costs, 4*l.* 11s. 4d.

Another correspondent, in connection with the same neighbourhood, writes as follows:—

"6, Bath-terrace, Horsemonger-lane,
Borough, Dec. 4, 1845.

SIR,—A friend of mine, a keeper of livery-stables on Blackheath, has had a sign-board (about 5 feet by 3 feet, and 1 inch thick), fixed against the front of his stables, with four iron holdfasts driven into the joints of the brickwork; for doing which, the district surveyor made a claim of 30s. My friend hesitated to pay him, after which he reduced the amount of his claim to 10s., which was paid, and a receipt given for the amount. I shall feel obliged by your informing me, through your excellent journal, if the demand made by the surveyor was in accordance with the Buildings Act.—I am, Sir, &c.,

NICHOLAS METHERELL."

Now, this exorbitant demand was not only unwise, but, as it seems to us, perfectly unjustifiable. It is such conduct as this, on the part of a very few individuals, which is bringing the whole body, most undeservedly, into disrepute. The Act sets forth the height at which signs or notice-boards must be fixed, and involves the necessity of sending notice to the district-surveyor before putting up such, that he may see the directions are complied with; but for a service like this, a merely nominal fee, if any, should be taken. For the inspection and removal of projections, which involves writing notice, &c., the Act allows the surveyor to demand 10s. For such services as that alluded to by Mr. Metherell, or for seeing, for example, that a chimney-pot above 4 feet high is properly fixed, half-a-crown would be ample. This might easily be put on a proper footing by the referees.

A few days ago, Mr. Geo. Porter, the surveyor for the district of Newington, summoned Mr. John Wilson, builder, of Southwark, before a magistrate, for having neglected to give him notice of having begun to resume operations in the building of certain dwelling-houses, after suspending the progress of such building for three calendar months, for which omission he was liable, under the provisions of the Act, to a penalty of 20*l.*

It appeared that, in the latter end of the year 1844, the defendant, Mr. Wilson, gave the necessary notices to Mr. Porter for the erection of five dwelling-houses in the front of Pownall-terrace, in the Kennington-road, and, in order to avoid the provisions of the new Act, had formed a foundation, and laid down a certain quantity of brickwork, before the new Act actually came into force. Mr. Porter, conceiving that the building was not in such a state, when the new Act came into force, as to take it out of its provisions, the matter was submitted to the official referees, who made an award in his favour. Instead, however, of following up the award of the referees, Mr. Porter thought proper to proceed against Mr. Wilson under that clause of the Act by which a builder is required, where the operation of a building is suspended for three calendar months, to give notice to the surveyor of his intention to recommence the building, as if he were about to commence a new building. Mr. Wilson, considering the building to be under the operation of the old, and not the new Act, had neglected to give this notice. The summons was ultimately dismissed on a technical objection.

It seems to us, with all deference to Mr. Porter, that this mode of proceeding carried an arbitrary aspect. It could hardly be expected that the builder, while contending that the work did not come under the provisions of the new Act, would give a notice admitting its control. The course taken by Mr. Porter we are compelled to place in the list of those we have termed *unwise*.

Those correspondents who complain of district surveyors for objecting to materials or workmanship, must not expect the slightest sympathy from us without the fullest proof that the objections were captious. On this head, and indeed in all cases where the interests of the public,—the actual purposes of the Act,—are really concerned, the district surveyors will no where find more strenuous support than in the pages of THE BUILDER. The office is a responsible one. It is not a sinecure,—a quiet provision for life in acknowledgment of the merit of the holder, as some of the new surveyors really seem to think it. The money they are to receive, is for services rendered, and should they fail to perform those services disgrace will follow. The recent fall of three houses in Cavendish-place, Wandsworth-road, and its fatal results, with two or three similar disasters, particulars of which are now before us, and which are said to reflect in some degree on the district surveyors, may serve to illustrate this assertion. Still we do not allude to these particular accidents with any view of imputing blame, our information is at present insufficient, but merely to shew the responsibility of the office, and to induce a proper consideration for it on the part of the public, when duly discharged.

We may mention, relative to the revision of the Act, that several committees have been appointed out of doors to consider the subject. A committee of the vestry of St. Marylebone met at the court-house last week; Mr. H. Biers in the chair. They were attended by Mr. John White, the district surveyor of the parish, and Mr. Scace, the parochial surveyor, and having gone through, and commented upon various matters requiring revision, adjourned for the purpose of preparing a report, to be brought up to the vestry on an early day.

THE RESTORATION OF THE PARTHENON AT THE BRITISH MUSEUM.

THE model of the Parthenon, restored by Mr. R. C. Lucas, to which we alluded some months ago, is now completed, and has been recently purchased by the trustees of the British Museum for public exhibition in the Elgin room. It is on a large scale, being about nine feet in length, by six in width. The structure of the temple is executed chiefly in wood, the sculptures are modelled in a kind of wax. It is placed upon a lofty basement, so that the pediment is sufficiently above the eye to convey something like an idea of the perspective in which the original was viewed. The figures and groups are all modelled with the greatest care, either from the torsoes brought by Lord Elgin from Greece, or still remaining there, or the drawings of Carrey made before the partial destruction of the Parthenon in 1687; those portions of the original design which have irretrievably perished, have been supplied by the promptings of Mr. Lucas's own powers of invention, aided by a most careful study of all that the extant remains of ancient art, and the research and sagacity of modern archæology, could furnish, by way of authority and illustration. These divers materials have been combined with extraordinary industry, ingenuity, and judgment by Mr. Lucas, and with the happiest result. The impression produced by the restored model, small as its scale is, is novel and imposing. A new world of art seems disclosed to us. For the first time we behold the true character of Greek architecture.

In northern climates and modern times, the Doric order has never really engaged our sympathies; its cold, normal beauty of structure has been authoritatively proclaimed the standard of faultless simplicity, and admired as such, but the untenanted pediments, and empty metopes impart to the mind an impression of cheerless and desolate monotony; all who felt thus, unconsciously recognized the truth, that such Doric architecture is a mere lifeless thing, a body from which the spirit which once animated it had left. When we look at the model of the Parthenon, all seems instinct with vitality.

The pediments are filled with majestic forms, so arranged, as, out of the utmost variety of attitude and grouping, to produce one great harmonious composition. Along the sides of the temple, standing out like jewels on a diadem, are the metopes; each presents an allusion to the mythic and primeval period of Athenian history, a passage, as it were, from a great national epic; some exploit of Pallas, of the deities of the soil, or of Theseus or other Athenian heroes; some sacred religious ceremony; or as in the metopes brought over by Lord Elgin, a great contest like that of the Centaurs and Lapithæ,

is told in a succession of metopes, each a complete picture framed in its triglyphs, standing out like the single combats which are successively presented to the eye in the battles in the Iliad, detached from the main action; in the metopes, as in the description, from the infinite variety of movement and grouping, there is no monotony in the iteration of subject.

If we turn our eye from the bold projection of the metopes to the interior of the peristyle, we then behold, by a more subdued light and in a slighter relief, the matchless frieze. If in the pediments we see the perfect beauty of divine forms as created by the hand of Phidias, if the metopes represent that second mythic period, the heroic age, so in the frieze do we see revealed to us the actual life of antiquity. The people among whom Phidias lived stand before us in bodily presence, as every five years in the most sacred festival of their city they moved in solemn array to the temple of their tutelary goddess. The procession of this frieze, from its continuity and the nature of its subject, is more studied and better understood by the public than the rest of the sculptures in the Elgin room, but Mr. Lucas has done good service by showing in his model its relation to the metopes, and the consequent difference in the depth of its relief, to suit the diminished quantity of light. See some excellent remarks on this subject in the "Penny Cyclopædia," Basso relievo. We have glanced at a few chief features in Mr. Lucas's model, rather by way of invitation to the public to examine it for themselves, than as an accurate account of it. Our limits will not here permit us to do justice to a work the result of so much enterprize, judgment, research, and artistic power.

Nothing but the most resolute will and earnest study of the antique would have enabled Mr. Lucas to deal with the many difficult questions which this question involved; to ascertain the original motive of the pedimental compositions, it was necessary for him to examine and compare the arguments of the different writers on the mythology of the Parthenon—arguments full of learned allusion, written mostly in foreign languages, and appealing to habits of thought novel to the English mind. With infinite tact, Mr. Lucas has selected out of conflicting elements all the material most useful for his purpose; he has deferred to received authority, embodied suggestion, and, where conflicting theories were irreconcileable, he has with æsthetic acumen cut the Gordian knot of controversy, and restored the composition according to such analogies of design as an artist only can perceive. We regret that we can do no more than mention the chryselephantine of the Virgin Goddess, who stands all glorious within the cella, arrayed with a gorgeousness that would have tempted the cupidity of the temple-robbing monarch, Dionysius of Syracuse; nor can we enter upon the *vexata questio* of the metallic and polychrome decorations of the Parthenon, which Mr. Lucas has, we think wisely, as far as possible eschewed.

Enabled by this model to realize more definitely the idea of the great design in which architecture, sculpture, and painting were so marvellously combined by Phidias into one harmonious composition, conveying by three different forms of expression, and, as it were, trilingually, one great idea, we are naturally led to turn our eyes on the present condition of English art.

Why have we, in this country, arbitrarily put asunder what the Greeks had joined—Painting, Sculpture, and Archi tecture? Why did we set apart these three fair sisters at their second birth—the *renaissance*—and with step-motherly nurture bring them up in separate establishments, teaching them separate aims and principles of action, and giving to them divided interests? why, having done this, do we now as arbitrarily bring them together, after so many years of estrangement, and expect from them all at once, readiness in co-operation and common principles of design in the execution of our public works? The great task now demanded from English art, the decoration of the Houses of Parliament, so that on those walls shall be written the chronicle of the British race, in those niches enshrined the memory of their great men, in those windows "richly dight," the heraldic splendour of her regal lines—this subject, pregnant with great ideas, must not be made "a declaration and a theme" for a half-taught school, nor can be dealt with by combining into one patchwork the compositions of single artists, working without concert or unity of purpose. It must be treated by a school directed by one mind, and taught to work out harmoniously, portions of one great design; to give utterance with one voice, to the great thought of which the design of such a building should bear the impress.

PRYOR'S BANK, FULHAM.

In a previous number of our journal,* we gave an engraving of an Electoral Chair belonging to Mr. Baylis, of the Pryor's Bank, Fulham, and said we might one day lay before our readers, some account of the extraordinary collection of Gothic decorations and utensils, deposited in that quaintest of quaint residences. The current number of *Fraser's Magazine* contains a charming article on this very subject, illustrated by twenty-nine woodcuts; and although to convey any thing like a complete account of Pryor's Bank, its treasures, and the kindnesses of its owners, Mr. Baylis and Mr. Whitmore, would need a volume, instead of the article sixteen pages long, here devoted to them, a very clear and pleasant notion of all is given by it.

A passing glance externally, as you pass over Putney-bridge, would ascribe it to the Cockney Gothic tribe; internally it is a mine of interest. "The whole edifice," says the writer in *Fraser*, "from the kitchen to the bed-rooms is a museum, arranged with a view to pictorial effect; and if it were to be called 'the Museum of British Antiquities,' it would be found more worthy of the name than the national institution so designated. Rich as that collection is in the classic works of Italy and Greece, and the mysterious remains (until recently) of ancient Egypt; specimens illustrative of Norman, Saxon, Romano-British, and Celtic manners, tastes, and manufactures are sought for in vain in the building nominally appropriated by the nation for their reception, arrangement, and preservation. Equally deficient is the British Museum in medieval antiquities, and the consequence is, that the artist who desires truthfulness in an English work, knows not where to seek for the necessary information.

In a print, published about forty years since, by J. Edington, 64, Gracechurch-street, of Fulham Church, as seen from the river, the ancient aspect of the modern Pryor's Bank is preserved. The situation of this humble residence having attracted the fancy of Mr. Walsh Porter, he purchased it, raised the building by an additional story, replaced its latticed casements by windows of coloured glass, and fitted the interior with grotesque embellishments and theatrical decorations; and here he had frequently the honour of receiving and entertaining the late king, George IV., when Prince of Wales. It was then called Vine Cottage, and having been disposed of by Mr. Porter, became, in 1813, the residence of Lady Hawarden, and, subsequently, of William Holmes, Esq., M.P., who sold it to Mr. Baylis and Mr. Lechmere Whitmore about 1834.

By them a luxurious vine which covered the exterior was cut down, and the cottage, named after it, replaced by a modern antique house. Mr. Baylis being a true antiquary, his good taste induced him to respect neglected things, when remarkable as works of art, and inspired him and his friend Mr. Whitmore with the wish to collect and preserve some of the many fine specimens of ancient manufacture, that had found their way into this country from the Continent, as well as to rescue from destruction relics of old England. In the monuments and carvings which had been removed from dilapidated churches, and in the furniture which had been turned out of the noble mansions of England—the 'halls' and 'old places'—Mr. Baylis saw the tangible records of the history of his country; and, desirous of upholding such memorials, he gleaned a rich harvest from the lumber of brokers' shops, and saved from oblivion articles illustrative of various tastes and periods, that were daily in the course of macadamisation or of being consumed for firewood.

The materials thus acquired were freely used by him in the construction of a new building upon the site of Vine Cottage, and adapted with considerable skill; but when neither the vine nor the cottage were in existence, it appeared to Mr. Baylis ridiculous to allow a misnomer to attach itself to the spot. After due deliberation, therefore, respecting the situation upon a delightful bank of gravel, and the association which an assemblage of ecclesiastic carvings and objects connected with 'monkish memories,' there collected, were likely to produce upon the mind, the new house was styled the 'Pryor's Bank.' But however characteristic and carefully selected this appellation might have been, that it was at first misunderstood or misrepresented by the facetious natives of Fulham, is proved from a Putney tradesman inquiring to what extent Messrs. Pryors' bank would discount good bills!"

Real old English hospitality has been always practised by the owners of Pryor's Bank, and their entertainments have usually been distinguished from those of every day by masques or plays, and the distribution of numerous literary *pieces de circonstances*. One of these, "the last new ballad," circulated at an entertainment given in 1843, during the Fulham regatta, we are led to reprint, as affording a bird's-eye view of the place:—

"Strawberry Hill has pass'd away,
Every house must have its day;
So in antiquarian rank
Up sprung here the Pryor's Bank,
Full of glorious tapestry,—
Full as well as house can be:
And of carvings old and quaint,
Relics of some mitre'd saint,
'Tis—I hate to be perfidious—
'Tis a house most sacrilegious.

Glorious, glowing painted glass,
What its beauty can surpass?
Shrines bedeck'd with gems we see,
Overhung by canopy
Of embroider'd curtains rare—
Wondrous works of time and care!
Up stairs, down stairs, in the hall,
There is something great or small
To attract the curious eye
Into it to rudely pry.

Here some niche or cabinet
Full of rarities is set;
Here some picture—'precious bit'—
There's no time to dwell on it;
Bronzes, china—all present
Each their own sweet blandishment.
But what makes our pleasure here,
Is our welcome and our cheer;
So I'll not say one bit more,—
Long live Baylis and Whitmore!"

A right pleasant day that was; and the gratification we have in recalling it leads us to risk a "pshaw!" from those of our readers who wish to find in our pages only the *practical*; in consideration of whom we will take the following dissertation on

PLATES AND DISHES,

suggested to the writer of the article already quoted, by the number and variety of those he finds in the kitchen. The history of them, he says, would afford an opportunity for a dissertation on the rise and progress of the fine arts in this country, as they present most curious and important specimens of early drawing, painting and poetry. "The old English plate was a square piece of wood, which indeed is not quite obsolete at the present hour. The improvement upon this primitive plate was a circular platter, with a raised edge; but there were also thin, circular, flat plates of beechwood in use for the dessert or confection, and they were gilt and painted upon one side, and inscribed with pious, or instructive, or amorous mottos, suited to the taste of the society in which they were produced. Such circular plates are now well known to antiquaries under the name of 'roundels,' and were at one time generally supposed by them to have been used as cards for fortune-telling, or playing with at questions and answers. More sober research into their origin and use, shews that they were painted and decorated with conventional patterns by nuns, who left blank spaces for the mottos, to be supplied by the more learned monks; and a set of these roundels generally consisted of twelve. As specimens of the style of these mottos about the time of Henry VII. or VIII., the following may be taken:—

'Wheresoeber thou trabeleste,
Este, Weste, Northe, or Southe,
Learne neber to looke
A geben horsse in the mouthe.'

* P. 150, *ante*.

'In friends ther ys flattery,
In men lyttell trust,
Thoughe fayre they profter,
They be often unjuste.'

There are many sets of verses for roundels extant in manuscript, and a few have been printed; indeed, it appears likely that to the love for this species of composition we owe Tusser's "Five Hundred Points of good Husbandry," and most of his other admonitory verses.

After the Reformation coloured prints superseded the painted manuscript 'poesies' of the nuns and monks, and the elder De Passe, and other artists of the period of James I. and Charles I., produced a variety of oval and circular engravings, which were pasted upon roundels and varnished over. The subjects generally selected were those which naturally arranged themselves into a set of twelve, as the months. By the Puritans, the beechen roundels thus decorated were regarded with especial dislike, and they returned to the use of the unadorned trencher and 'Godly platter.' When 'the Merry Monarch' was restored, he brought over with him from Holland plates and dishes manufactured at Delft, where the porcelain known as Faenza, Faience, Majolica, and Fynlina ware, made during the fifteenth century in the north of Italy, and upon the embellishments of which, according to Lamartinière, the pencils of Raffaelle, Giulio Romano, and the Caracci were employed, had been successfully, although coarsely imitated. And it must be confessed, that many of the old Dutch plates, dishes, and bowls, upon the kitchen-shelves of the Pryor's Bank, deserve to be admired for boldness of design, effective combinations of colour, and the manual dexterity displayed in the execution of the patterns. The superior delicacy of the porcelain of China, which about this time began to be imported freely into England from the East, caused it to be preferred to the "Dutch ware," and the consequence of international commerce was, that the Chinese imitated European devices and patterns upon their porcelain, probably with the view of rendering the article more acceptable in the Dutch and English markets. But while the Chinese were imitating us we were copying their style of art in the potteries of Staffordshire, with the commercial manufacturing advantage given by the power of transferring a print to the clay over the production of the same effect by means of the pencil, an idea no doubt suggested by our roundels of Charles the First's time, and which process became of the same relative importance as printing to manuscript. This was the origin of our common blue-and-white plate, or what is known as 'the willow pattern,' where

'Walking through their groves of trees,
Blue bridges and blue rivers,
Little think those three Chinese
They'll soon be smash'd to shivers.'

The popularity of this porcelain pattern must not be ascribed to superior beauty or cheapness, for to the eye of taste surely a pure plain white plate is infinitely superior to an unfeeling copy of a Chinese pagoda, bridge, and willow tree 'in blue print.' The fact is, that the bugbear of a vulgar mind—'fashion'—long rendered it imperative upon every good housewife and substantial householder, to keep up a certain dinner-set of earthenware, consisting of two soup-tureens and a relative proportion of dishes and vegetable-dishes, with covers, soup-plates, dinner-plates, and dessert-plates, which were all to correspond; and should any accidental breakage of crockery take place, it was a manufacturing trick to make it a matter of extra-proportionate expense and difficulty, readily to replace the same unless it happened to be of 'the blue willow pattern.' The practice, however, of using for the dessert-service, plates of Worcester china painted by hand, and the execution of many of which as works of art call for our admiration as much as any enamel, created a taste for forming what are called harlequin sets, among which, if a few plates happen to be

'Smash'd to shivers'

the value of the whole set is only proportionately depreciated, and what has been broken may perhaps be advantageously replaced."

We commend the whole article to our readers.

CITY ANTIQUITIES.

MR. TITE v. MR. ROACH SMITH.

Sir,—On Wednesday evening last, after the regular business of the ordinary meeting of the British Archæological Association, I brought forward and read the letter from Mr. Tite, printed in The Builder of this week, which letter I had not received when I addressed you, in reference to the vague and erroneous statements uttered by Mr. Tite, and printed in The Builder of the week previous.

Although this letter contains much irrelevant matter, and I am perfectly satisfied would, to the minds of all who know me, carry in itself conviction of the absurdity of the charges brought against me, yet, from the respectability of the writer, it is calculated to excite prejudice in quarters where I may presume I am unknown. A necessity therefore arises for my meeting the charges as publicly as possible, and I regret that Mr. Tite could not have made it convenient to accept the invitation sent him to be present last Wednesday at the meeting of the Association, when he would have had an opportunity of hearing my explanation, and of making any observations which he might have thought necessary. The statements made by Mr. Tite amount to a charge of breach of faith towards him, and of opposition to the Joint Gresham Committee in their endeavours to collect antiquities discovered on the site of the New Royal Exchange. As briefly as possible I proceed to meet the alleged facts he has adduced.

On the 24th of Nov. 1840, I obtained an order from Mr. Tite to visit the excavations, during the months of December and January. I was much engaged both at home and in the country, and made no visit to the Exchange that would have required the order, until the 1st of February. On the evening of 31st of January, I returned from an excursion in Kent. On this day occurred a circumstance upon which hangs the chief charge brought against me by Mr. Tite, nearly five years afterwards, which charge he asserts is supported by three witnesses. On entering my house, I noticed a fragment of a statue of Charles II., which I ascertained had been left by two drunken workmen, who stated that they had brought it from the Royal Exchange. I immediately gave orders to prevent a like occurrence, and when the men called in the morning, I ordered them to take it to the museum in Freeman's Court, and, moreover, paid them for a barrow to carry it in. Whether they took it back or not I cannot tell, but I suspect they took it in mistake either to the Guildhall or to the British Museum. On the following afternoon I made my first formal visit to the excavations, intending to avail myself of the *privilege* granted by Mr. Tite, to obtain information, and to make sketches. I had scarcely entered, before I was stopped by a stout burly man, in whom I recognized a person who, some years previous, had been summoned by me before the Lord Mayor for ferociously assaulting a youth then in my employ. He immediately ordered me to leave the premises, and, using the most brutal language, threatened if I delayed, to get me *kicked off*. I mildly expostulated with him, and begged him to tell me the meaning of such unprovoked conduct. "Meaning!" said he, "didn't ye get a man to bring ye an image t'other day? and then didn't ye bribe 'im to take it to the Museum?" I at once saw the ridiculous mistake the man had made, and I attempted to set him right, but my pacificatory efforts only increased his rage and violence. I then announced myself as under the especial protection of Mr. Tite, confirmed by a written order. His reply my pen refuses to write; it included a substantive signifying the very reverse of truth, with a forcible participle, meaning total exclusion from mercy, prefixed, and concluded with a demand of "Show me the order." I respectfully asked him to step with me to my house, or, to permit me to fetch it. This was answered by an insulting observation, concluding with "*We* act under the Gresham Committee, and have orders to hinder *you* from coming here. You have bought things of a rascal called Sullivan, who we had discharged, as great a blackguard as ever lived, and I can prove it." Who the unworthy individual he alluded to was, I have not the slightest notion. During the dialogue, I was every moment expecting this Gresham agent would have struck me, and I believe he would, had he not been restrained by the people who had assembled around us, and by the appearance of another person in authority (Mr. Tite's second witness I presume), who had that morning called upon me about the lost fragment of sculpture. To him I appealed, and asked whether I was to be subjected to this usage, holding as I did an order from Mr. Tite? He replied, "Mr. Tite can give you no order to buy things here, and we have orders from the Gresham Committee to prevent you coming upon the ground." I returned home, made notes of these particulars, and wrote to Mr. Tite. On the following day (I believe) I again visited the works and, in the presence of Mr. Tite, had to encounter similar treatment, Mr. Tite observing that he had given me an order, and could do nothing more! I then said, that if his order could not protect me from personal violence, if I came again I should feel it necessary (in self-defence), to come armed, when, if the Gresham agent should think fit to put his threats into execution, by laying hands or feet on my person, he might run the risk of being shot. But if antiquaries and archæologists sometimes speak daggers and bullets, they seldom use any beyond the sharp pointed and keen edged goose quill, and the pop-gun pellet of paper, which explodes in an ill-natured critique; and if the intemperate servant, who had doubtless exceeded his orders, had been discharged by Mr. Tite (as he would have been by some gentlemen), I should instantly have pleaded for his restoration.

For about two months I declined, on account of fear of a recurrence of these unpleasant obstructions, from visiting the excavations. These two months, and the two months previous comprise the period during which Mr. Tite says "nothing of importance was found;" "and then he speaks of the pit (*opened in April*) and says, that "the clerks of the works, and the contractor's foreman, were constantly complaining to me of your interference with the workmen, until it came to an actual quarrel." Now, if nothing had been found in January, February, and March, about what were the complaints made which led to the *quarrel* which took place on the 1st and 2nd of February, and not in April, when the pit was opened? In fact, when the *quarrel* occurred, nothing of importance was found, according to Mr. Tite's shewing, and when antiquities were discovered in the pit, no *quarrel* took place!

From the beginning of February to the beginning of April, I was engaged in prosecuting researches on the site of the French Protestant Church in Threadneedle-street, with the assistance, not of any city company or committee, but of a private individual, Mr. E. Moxhay, and the discovery and preservation of two beautiful tessellated Roman pavements were the results of his liberality. Here let me contrast individual intelligence, generosity, and public spirit, with corporate ignorance, meanness, and selfishness. Had I applied to this corporation (now of a sudden made to affect so much anxiety to fit up their *one* room for a museum), I should have been laughed at. "'Tis only rubble and rubbish," said the leader of the Court of Common Council, when, a short time since, that body gave up the remnant of the old city boundary wall, on Tower Hill, to be pulled down; and these pavements in their eyes would have been nothing more, and assuredly would not have been saved from demolition, as the city wall has been, in spite of the efforts of the corporation. Drawings and models of these pavements have been made and circulated throughout the kingdom, and one of them has furnished an elegant design to a maker of floor-cloth in Moorgate-street. Mr. Moxhay placed them at my disposal, at the very period when Mr. Tite falsely accuses me of being actuated by *personal objects*. I recommended that the pavement, which could be safely removed, should be sent to the British Museum, and entirely through my advice it was there deposited, and I placed models of both in the collection of the Society of Antiquaries. If I had been so anxious to "obtain possession" of every thing for my own collection or for "personal objects," is it likely when these interesting and valuable remains were literally presented to me, I should have transferred them to a public museum? Was it likely when I acted thus in Threadneedle-street, I should have shown, at the same time, so different a disposition on the site of the Royal Exchange? That I should have been lavish of pounds on

the one spot, and covetous of farthings on the other?

In April I again visited the excavations on the site of the Royal Exchange, as I perceived hundreds were in the habit of doing daily *without orders*. At this time the pit alluded to was being excavated, and I made hasty sketches, and took notes occasionally, but not without fear of a recurrence of former direct obstruction. My visits did not admit of such minute examination as the subject demanded, but *no quarrel took place*, no complaints could have been made, for I never remember being there without seeing Mr. Russell, the clerk of the works, or some of the gentlemen from Mr. Tite's office, and I must have heard of the complaints if there had been any. On no occasion did I ever interfere with anybody, and the only charges that can be imagined to have been made must have been those preferred more than two months previous, which I have shown were absurd and false. I hasten now to the stories about the bell, and the leaden medalet, or jetton. Mr. Tite had read in the "Archæologia" that a bell, among other objects, had been found in the pit, but he has never visited my museum to ascertain if I actually possessed this enviable relic, and, if so, how and by what means, and at what period of time. He has not, in fact, taken the trouble to ascertain the truth of any of the trumpery tales upon which he seems to have founded his accusations against my conduct and character.

When, by the circulation of handbills, by "boarding round the site," and by other means considered necessary to their archæological *battue*, the Joint Committee of Gresham Affairs had had the run of the cover to themselves, I proceed to show how, alone, and single-handed, I succeeded in preserving what these zealous gentlemen, with their handbills and boards, had overlooked. Mr. Tite says truly that this pit was filled with soft peaty earth; but Mr. Tite is not perhaps aware that this soft peaty earth contained many minor objects of interest which it was impossible to detect by boards and handbills, and which were carted away in this soft peaty earth, and disposed of at a remote distance from the site of exhumation in an open unfenced situation, accessible to anybody who might have cared to examine it. From this rejected "soft peaty earth," far from the Royal Exchange, I procured, from time to time, many curious objects of ancient art, which certainly, but for my exertions, would never have been discovered and preserved.

Mr. Tite's "Mountain in Labour" produces a bell, and a medalet in lead! The latter he says, "is a very remarkable curiosity, and surely the only proper place for such could not be any private collection!" This little peace of lead came into my possession long before I had the honour of knowing Mr. Tite, although he says he is a Fellow of the Society of Antiquaries of some standing. It was met with during some partial excavation, before the general works commenced. So little consequence did I attach to it, that it remained for months upon my table before I was induced to examine and clean it, when I deciphered an inscription and the Tudor arms. It was previously a lump of worthless lead, but I regenerated its defaced impress, and thus *made* it an object of interest, but surely not an object to be envied the possession of. I exhibited it to the Numismatic Society, and to the Society of Antiquaries; I freely permitted a wood-cut of it to be made for one of the pictorial weekly newspapers; and I adapted the inscription to the obverse of a medal of Prince Albert, designed by me, and engraved by Mr. Stothard * to commemorate the Prince's advent to lay the first stone of the New Royal Exchange, the Joint Gresham Committee having omitted to order a medal to be engraved to record this interesting event. If Mr. Tite will now point out to me the more proper place, where he insinuates a better use would have been made of this farthing's-worth of lead, I will cheerfully cede possession of it. Had I been a servant of the corporation, and seized some thirty or forty gold nobles, on behalf of the city, and had never rendered to science or to the city exchequer a proper account of the *treasure trove*, then Mr. Tite might, with some reason and justice, have imputed to me "personal objects," and have worthily stood forward as a public accuser. But, I trust, I have said enough to show that the accusations brought against me are frivolous, vexatious, and false; that they have all the appearance of being *an after-thought*, and are calculated to mislead the public, and to injure private character; that they neither apply to me nor to my colleagues in the city, and that they are unworthy the office Mr. Tite holds, through which office he has thought proper to disseminate them.—I am, Sir, &c.,

CHARLES ROACH SMITH.

5, Liverpool-street, City, Dec. 6.

* Of Arlington-street, Myddleton-square.

COMPETITION ALTAR-PIECE FOR ST. JAMES'S CHURCH, BERMONDSEY.

PAINTING and sculpture are essential as accompaniments and embellishments of architecture, and it can scarcely be said that architecture in its highest departments is complete or perfect without their aid. In the ancient Christian edifices of Europe, both were extensively employed, and painting, especially, seems to have been regarded not merely as an integral and necessary auxiliary, but in some instances as a feature of paramount importance. The architectural remains of Lombardy, of Venice, and of Sicily, with those of Normandy, and of our own country, shew that the painter was employed to an immense extent in the decorations of the altars, walls, vaulting, and other parts of churches. Passages from the Holy Scriptures; monkish legends of the lives of saints; memorials of the religious deeds of kings and princes; arabesque and floral decorations, may still be traced in abundant instances, proving incontestibly that the taste for pictorial art, and for its application to sacred purposes, flourished without interruption from the introduction of Christianity in Britain to the dissolution of monasteries by the tyrant, Henry VIII. After the Reformation, it was a favourite employment of bigots and fanatics to destroy and mutilate these, which had become objects of Roman Catholic superstition. The prejudice thus engendered against the introduction of pictures into churches, still subsists amongst many of the Protestant clergy; and has operated most unfavorably on the development of art in Britain. An unworthy parsimony in the erection of our sacred edifices has further contributed to exclude from them the works of the painter, and has thereby deprived them (with but few exceptions) of their most effective and appropriate embellishments.

We may, however, hope that a better era for art has arrived. Painting and sculpture have received their due consideration in the works in progress for the accommodation of the Houses of Parliament; and the extensive application of the ancient models to new churches in all parts of England, has induced a desire to embellish these structures somewhat in accordance with those in imitation or emulation of which they have been constructed. Hence we find that stained glass, encaustic tiles, and similar accessories, are now largely employed. It is our present object to advert to the not less important point of the introduction of paintings in churches, not built in the mode adopted in the middle ages. In these structures, modelled upon the classic forms of ancient Greece and Rome, the *altar-piece* is perhaps the only part to which painting can be successfully applied; and it is to be regretted that an object so well adapted to stimulate and exercise the powers of the artist in the highest branch of art should be so frequently neglected. Without adverting to the few pictures produced of late years as altar-pieces, we may proceed to notice the Ascension, by Mr. John Wood, which has just been completed for St. James's Church, at Bermondsey.

It appears that the late Mr. Harcourt, a wealthy inhabitant of the parish, bequeathed the sum of 500*l.* for the purchase of a picture, to be placed in a recess over the communion-table of that church. The trustees not being able to procure a satisfactory picture for the purpose, advertised for sketches, upon the understanding that the artist whose production was selected should forwith execute the work, and receive the amount of the bequest. They fixed upon the Ascension of Our Saviour as the subject, and the finished sketches in oil were required to be 36 inches in height by 17 inches in width. The altar-piece, including a frame provided by the trustees, to be 25 feet in height by 11 feet in width. On the 4th of December, 1844, nearly 80 compositions were sent in; several of them by members of the Royal Academy. Mr. Eastlake, R.A., and Mr. Haydon were appointed to examine them, and to select the most meritorious; and Mr. Cooke, R.A., was to decide in the event of those gentlemen differing in opinion. The two former however agreed that Mr. John Wood's sketch was the best of those submitted, and Mr. Cooke fully concurred in their opinion. A decision thus unanimous, by artists of such high reputation and admitted taste, naturally excited the curiosity of all lovers of the arts; and it is therefore gratifying to find that the picture, which is now completed, fully justifies the opinion so given of its merits, and reflects the highest honour on the artist.

The figures in Mr. Wood's composition are considerably above the natural size. On a canvass of 275 square feet (25 feet by 11) the artist has given, in the upper part, a full-length figure of the Saviour, occupying nearly one-half of the picture. The figure appears buoyant in air, with a nimbus around the head, the radiation from which illumines with a golden effulgence the upper region of the sky. Clothed in a flowing robe, or mantle, over a white vestment, with arms extended, and a placid expression of countenance, He casts a parting look towards his earthly disciples and associates, whilst his body is evidently in the act of ascension from them. The eleven disciples, witnesses of the superhuman event, the ascension of their lord and master into "the heaven of heavens," are at once astonished, terrified, and glorified by the beatific event. An incident so unparalled could not fail to produce varied and conflicting emotions in its witnesses. The artist has endeavoured to portray these, in the attitudes and expression of the apostles. They are represented in various positions; standing, kneeling, prostrated, with uplifted hands and faces, bodies bent with reverential awe and devotion. The artist has apparently familiarized himself with the best accounts and representations of the age, personal character, and costumes of the time which he had to depict; and he must have attained a high proficiency in his art to have given not only variety, but almost personal identity to the eleven apostles he has represented, and to have clothed them in costume which, both in form and colouring, should satisfy the eye of the critic, and the feelings of the Christian.

The production is one that can hardly fail to advance the character of the British school, and to advance its meritorious author considerably in his profession. We cannot conclude without expressing our hope that it will not be long before the name of John Wood is enrolled amongst the members of the Royal Academy.

CONSTRUCTION OF ROOFS.

SIR,—I have been recommended by some professional gentlemen, well acquainted with your journal, to submit to you a question respecting the comparative strength of queen-post and king-post roofs. The building to which I refer is Doric, the pediment very flat, and the width of the roof 60 feet. The ceiling has sunk a few inches, in consequence of the heads of the queen-posts having yielded to the pressure, and thus, much of the weight of the roof has been brought down upon the beams. It has been suggested, that the only remedy is to substitute king-post principals; these alone having strength to bear a roof so flat as the one in question. Others contend that queen-post principals are best. By giving your opinion, you would confer a favour on many persons besides your obedient servant,

Hull, Dec. 4. H. N.

*** For the span named, we should use a queen-post roof. Both king and queen-posts should be of hard oak, and the heads if formed in the common manner, should be as small as possible, as by their shrinking, sagging is caused. To lessen the possibility of this, it is a good plan to make the end of the principal rafter abut against the straining beam; in this case the tie-beams should be each in two pieces, notched on, one on each side and bolted together.

VENTILATION OF STABLES.

FORGETFULNESS OF ARCHITECTS' SERVICES.

"Suum cuique."—In your last number you alluded to Mr. Dickinson's stables, in Curzon-street, and the system of ventilation there adopted. As professional services are too often forgotten in descriptions of new buildings, I am sure you will take an early opportunity of stating that these stables were executed from my plans and superintendence. Mr. Dickinson required an adequate and effectual ventilation; Mr. Sylvester was consulted, and advised the principles of the system; and the necessary structural arrangements and working out of these principles were left to the architect.

If a similar division of labour were adopted in public buildings, which require ventilation on a large scale, and the details of construction left to the architect to embody in the building, I think we should not have to complain of the monstrous excrescences which disfigure many edifices where the ventilating doctors have been trying their processes, apparently without any regard to architectural arrangements. The remarks in your last number on the ventilation of the schools at Swinton are so perfectly applicable to the subject, that I feel it unnecessary to say one word more.

From the experience which I have had, I am inclined to believe that many of the failures which have attended the recent adoption of the ventilating system have arisen from the doctors attempting too much. They are like some young practitioners in the medical art, relying solely on drugs and nostrums, and forgetting the "vis medicatrix naturæ." In both cases I suspect, that a slight additional power given to the patient would enable him to throw off easily his complaint. I am, Sir, &c.,

Thomas Little.

*** We gladly insert the above to rectify an omission caused solely by want of information in that respect. We quite agree with our esteemed correspondent, and have often remarked it, the architect's services are too frequently forgotten in describing the merits of a building. If the result be not satisfactory, if (in his endeavour to meet the views of his employer and give him all he desires for some most inadequate amount), he should pare down too much, and a failure should occur, on him rests all the responsibility, and on him falls all the abuse.

CLAIM FOR RENT IN ASSESSING DILAPIDATIONS.

We have great pleasure in laying the following letter from Mr. George Smith (the architect of the Mercers' Company), before our readers. In connection with Mr. Tattersall's, which appeared last week,* both bearing out the opinions we expressed in the first instance, it may be considered decisive.

My Dear Sir,—I have carefully perused and considered the "Question in Assessing Dilapidations," mentioned in The Builder of the 22nd ult.,† on which you desire my opinion. I have much pleasure in acceding to the request, and take leave to state I am of opinion that rent is not recoverable under the circumstances mentioned, nor is it customary to claim it. The lessee has a choice of two remedies, either to sue for damages during the existence of the lease, or by action of ejectment, the neglect of either or both, I think would and should bar him from the claim of rent. This is my view and opinion of the subject, whatever may be the legal construction put upon the case.

I remain, my dear Sir, &c.,

George Smith.

Mercers' Hall, Dec. 8, 1845.

Masons.—*The Great Western Advertiser* says:—"At no period, perhaps, was there a greater demand for this class of workmen than there is now at Swansea. The erection of the new Wesleyan Chapel, the Unitarian Chapel, the new Station House, and several other extensive private buildings, has produced an unprecedented demand for masons as well as for carpenters, &c., and excellent wages are received."

* P. 583, *ante*. † P. 566, *ante*.

A FEW QUESTIONS RESPECTING SEWERS.

1. What are the dimensions of the several sizes of sewers now in use?
2. What is the least size of a sewer, so that it may have the requisite space for examination, cleansing, repairing, or for opening new communications with new drains?
3. What is the desirable limit of the longest length for the smallest sized sewer?
4. What is the least fall that a sewer should have?
5. Has any plan been tried for forming wells at convenient distances to collect the sediment from the sewage?
6. What would be the best size and distances for such wells?
7. Is there any data to determine, in what average time a given length and size of sewer would furnish a given quantity of sediment?
8. Supposing such deposit sediment-wells to be found useful, what would be the best material, what the average cost of each, and what would be the value of manure that might be collected in this way in London?
9. Could an apparatus be contrived to take out the sediment, put it into suitable casks or other vessels, to be taken away in carts and conveyed by railway trucks into the country?
10. When the best form for sewers is determined, would it not be desirable to have the best form of bricks constructed for them?
11. Would not a form for the bottom of a sewer, resembling an inverted Gothic arch, be better than the egg-shape?
12. Would it not be an improvement to have longitudinal timber, as a sill at the bottom of sewers, not only for the purpose of making an even run for the sewage, but also to prevent unequal sinkings, which in some grounds must take place, and cause sediment deposits?
13. What difference, if any, is now made in the foundations of sewers, when in clay, gravel, sand, peat, &c.?
14. When there is sufficient fall in a sewer, why is any inconvenient limit given to the height?
15. Why should not the height of sewers, when the fall and other circumstances will admit of it, be such as would allow workmen to walk upright when examining, cleansing, repairing, or forming new inlets?
16. State what is the least space required from the surface of a road to the top of a sewer?
17. What depth and space is required under streets for water and gas-pipes?
18. When a new sewer is required, what is the usual mode of determining every circumstance that should be taken into consideration?
19. Is there any prepared list of points for inquiry?
20. What quantity of silt is taken out of sewers on an average?
21. What is the greatest distance between the shafts to the different sized sewers?
22. What are the names and descriptions of tools, &c., used in the several operations in the formation and subsequent works, and to keep sewers in efficient order?
23. Has any plan been tried to prevent the dirt, &c. from streets being carried by rain into sewers, without stopping the free circulation of air?
24. In applying the liquid sewage as manure, would it not be better to take off as much as possible from elevated positions to the country, than to allow all to run down to the Thames, and have the whole to elevate?
25. What extent of ground would the sewage of the higher parts of London manure, without pumping any?
26. Could not a great quantity of liquid sewage be directed to some one, or to the several railways, and be then drawn off by a tap into casks or tanks, on railway trucks, and thus conveyed into the country, where it would be useful?
27. What is the probable quantity, and what would be the cost per ton, that could be obtained in this way?
28. Might not sewers be made advantageously sufficiently large to contain water and gas-pipes?
29. Would not the proposed new park at Battersea be a good opportunity to adopt an improved system of forming sewers?—From

Nov. 26, 1845. A Looker-on.

THE STATE OF THE GAS MAINS.

Sir,—It has long been matter of surprise to me, that the Gas Companies of London should pay so little attention to the laying of, and keeping in order, the main pipes in the streets, and I believe that it is in a great measure owing to this that the inhabitants of London are compelled to pay the high price for gas they do at present, occasioned by the great extent of leakage existing in the pipes, caused not only from decay, but through the great carelessness displayed in their laying, and which leakage bears a very large per centage upon the gas made; I have known it to exceed 40 per cent. This loss might have been prevented (or nearly so), if the companies had but employed persons competent to undertake the work, and it behoves new companies to pay attention to this very important branch of gas lighting, as it will give them the means of competing better with existing companies, and supplying gas at a much lower rate than it is at present.

The mains of the companies now established have for the most part been laid without care or judgment, ignorant persons having been employed to superintend their laying, and the consequences are, the unequal supply of gas to different districts, and the loss by leakage as previously stated.

I have paid consideruble attention to this subject, and can bring forward proofs to corroborate my statements. It is scarcely possible to open the ground in any of the London streets without finding the earth impregnated with gas, and the iron gratings give evidence of the great waste that is taking place, and this must be perceptible to any one in passing through the streets. I can refer to the officers of the Commissioners of Sewers to bear me out in saying that it is dangerous entering the sewers, solely from this cause, until they have been ventilated by the opening of the air-holes. In addition to the nuisance from the stench, it is most dangerous, as accident or design might occasion an explosion that would be destructive to life and property; and the Government ought to take such steps as to make it compulsory on the different gas companies to make their main and service pipes sound, and to see that the officers of the gas companies are competent to perform the duties they undertake, by establishing a Board of Examiners, as proposed by Dr. Jones in his lectures on "Gas and Gas Meters," and preventing parties from applying who are entirely incompetent and wholly ignorant of the business they profess, and whose only claim and merit is that they have a friend among the directors, whereby grocers, tailors, &c. get transformed into engineers, superintendents, inspectors, &c.; and it is from the ignorance of such parties that London is at present the worst and dearest lighted city in which gas is introduced. Gas, under proper management, can and ought to be supplied from 4*s.* to 4*s.* 6*d.* per 1000 cubic feet, and many companies would find themselves in a very different position to what they are at present, and the shareholders would receive dividends instead of reports, as is the case at present with some of them. I shall resume this subject, as also on the quality of the London gas, gas-fittings, and gas-meters, if it should meet your views.—I am, &c.,

Dec. 5. "Carbon."

Materials for History of Bath.—We hear that the Royal Literary Institution at Bath has received a valuable present of about one hundred books and pamphlets, and several hundred engravings, illustrative of the city of Bath. The books and pamphlets relate chiefly to the history and antiquities of the Queen of the West, and show to what extent science and literature have been indebted to her. The engravings are arranged in a large folio volume, beginning with the Roman altars of the earliest period, and continued with successive maps of the city, views of the surrounding scenery, prints of its churches, public buildings, and public men. Of interesting objects, of which engravings could not be found, drawings have been made. The collection was formed with much care, and at great expense, by Capt. Chapman, who has been often a resident of the city, and who now generously wishes that the public should enjoy the fruit of his labours.

SOUTH PORCH, NORTH WALSHAM CHURCH, NORFOLK.

THE SOUTH PORCH OF NORTH WALSHAM CHURCH, NORFOLK.

The church of North Walsham is large, and mostly of a plain decorated character. It has nave and aisles, covered by a triple roof. The chancel has aisles, being, in fact, a continuation of the nave and aisles, there being no external division or mark to separate the eastern portion of the church from the western; but internally the chancel and the aisles were anciently divided from the nave by screens. The lower part of what was the rood screen is still remaining, and contains some good spandrils, very delicately carved: it also has the remains of painting and saints in the panels. The aisles were divided from the chancel by screens, as chapels. The nave piers are good, and of lofty proportions. The roofs are open, but very plain and rough. There is an enormous west gallery; yet behind it there is a vacant space large enough for an ordinary church, where the parish-engine and ladders are kept: here, too, near the south door, is the font, enclosed by a wooden railing, having a very good carved oak cover.

The south porch, the subject of the present engraving, is of a later character than the main body of the church, being of good perpendicular design. It is of a great size, and is open to the roof, never having been divided into two stories, as was frequently the case in large porches of this style. The part which is blocked up above the archway was, probably, a niche. The panelling on each side, and in the gable, buttresses, and plinth is filled in with the squared flint-work, so common among the churches of Norfolk. The flank has two windows, divided by a buttress, but they are bricked up as high as the springing.

The tower of the church is large, situated at the west end, and was of a great height, but is now in ruins. It was struck by lightning about a hundred years ago, since which time it has been gradually disappearing. A few years ago a great portion was obliged to be taken down. There is still, however, sufficient standing on the side next the church to stop the roof of the nave.

James K. Colling.

We append the following additional items of information.

On the north side of the chancel, near the east end, is a mural monument to the memory of Sir William Paston, knight., a native of the town, founder of the Grammar School, and ancestor of the first Earl of Yarmouth. It was erected during his life, by John Key, a freemason of London, who, by agreement dated 1607, undertook to fit up the tomb with an effigy of the knight in armour, 5½ feet long, for the sum of 200*l*. Sir William died a few months after making this agreement, aged 80 years. The church is dedicated to St. Nicholas.

The living is a vicarage, with the rectory of Antingham St. Mary annexed, in the archdeaconry of Norfolk and diocese of Norwich. King Edward the First, in his twelfth year, granted a licence to the Abbot of Holm to appropriate it, but this was not performed till December 9, 1338, when Anthony, Bishop of Norwich, appropriated it to the Convent of Holm, and it was to be transferred on the death of Roger de Hales, the then rector. On this event taking place the vicarage was formed, and the patronage was settled to be in the Abbot of Holm. The Lord Chancellor has the gift at present, and its annual value is estimated at 336*l*.

The town of north Walsham is situate on the high road to Norwich, and consists of three streets, diverging from a central area, in which stands the church. It is about 15 miles N.N.E. from Norwich, and 124 N.E. by N. from London. When the last census was taken it contained 2,655 inhabitants.

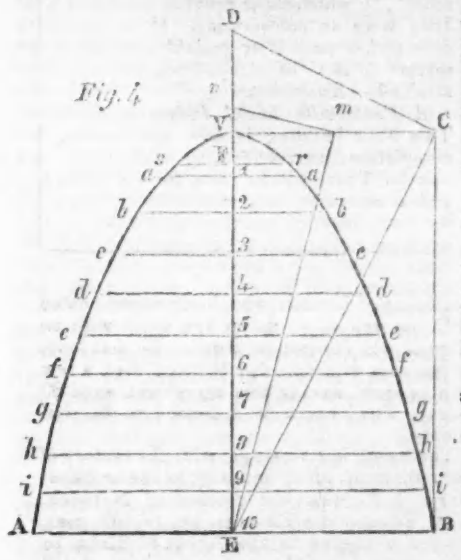
THE CONIC SECTIONS

CONSIDERED IN REFERENCE TO THEIR PRACTICAL APPLICATIONS.

The Parabola.

At page 493 of the present volume of THE BUILDER, we gave a method of describing the curve of a parabola by means of points, which points were obtained from a series of ordinates computed by the rule to equation (A), or that to equation (C), both these rules being applicable to the same purpose. This method of construction is sufficiently satisfactory in practice, and practical men adopt it in preference to other methods, in consequence of its being easily understood, and more in accordance with their usual routine of operation; it is, however, attended with greater mental and manual labour than could be wished for, since the ordinates have first to be computed numerically, and afterwards successively applied to a scale of equal parts, before the positions of the several points through which the curve has to pass can be assigned, and if these processes be not performed with considerable accuracy, the resulting figure may be very far different from the true one. In order, therefore, to avoid the errors incident to this mode of construction, we shall effect the operation in another way, by which the computation of the ordinates is dispensed with, as well as the application of the computed results to a scale of equal parts, and thence to the several ordinates which are supposed to be previously drawn. By this method it is necessary that the parameter of the axis and the position of the focus shall both be known, or rather, the position of the focus, and that of a point in the axis produced, through which the directrix of the curve is made to pass; but since both these points depend on the parameter, the magnitude of that element must first of all be ascertained. Now, it has already been stated, page 463, that the parameter of the axis is a third proportional to any abscissa and its corresponding ordinate, and we may here add, that the distance between the focus and vertex of the curve, and also the distance between the vertex of the curve and that point in the axis produced, through which the directrix passes, is equal to one-fourth of the parameter, hence the method of determining the positions of these points is obvious, and is as follows:—

Let AB, fig. 4, be the base of the required parabola, and let AB be bisected perpendicularly in E by the straight line ED, and make EV equal to the axis of the curve. Upon the axis EV, and the semi-base EB, describe the rectangular parallelogram EBCV, and draw



the diagonal EC; at the point C, erect the perpendicular CD, meeting the production of the axis in the point D; then is VD the parameter of the curve to the axis, EV.

Bisect VC in m, and at the point m erect the perpendicular mn, meeting the production of the axis in the point n, and make VF equal to Vn; then is F the focus and n the point in the axis through which the directrix of the curve must pass.

Since the triangle ECD is rightangled at C by the construction, and CV perpendicular to ED, it follows from the eighth proposition of the sixth book of Euclid's "Elements of Geometry," that the triangles ECV and CDV are similar to one another, and consequently the homologous sides are proportional; thus we have

$$EV : VC :: VC : VD = \frac{VC^2}{EV},$$

so that VD is a third proportional to the abcsissa VE, and the ordinate EB; but by the definitions the parameter of the curve to the axis VE, is a third proportional to any abscissa and its corresponding ordinate; consequently, VD is the parameter; this far, therefore, the construction is accurate.

Again, since the triangle Emn is rightangled at m, and mV perpendicular to En, the triangles EmV and mnV are similar to one another, and their homologous sides are proportional; hence we have

$$EV : V\,m :: V\,m : V\,n = \frac{V\,m^2}{EV};$$

from which it appears that Vn is a third proportional to EV and Vm; but Vm = ¼ VC by construction, consequently $V\,m^2 = \frac{1}{4}\,VC^2$, and by substitution it is $V\,n = \frac{VC^2}{4EV}$; so that Vn and VF are each of them equal to one-fourth of the parameter VD.

Through the point F draw the straight line rs parallel to AB, and make Fr and Fs respectively equal to Fn, or one-half of VD; then r and s are points in the curve, and rs is the parameter to the axis VE.

Let the axis VE be divided into any number of equal parts in the points 1, 2, 3, 4, &c., the more numerous the points of division, the more correctly will the curve be delineated; and through the several points thus determined, and parallel to the base AB, draw the series of double ordinates aa, bb, cc, dd, &c.; then from the focus F, with the several distances n 1, n 2, n 3, n 4, &c., intersect the ordinates both ways in the points a, a; b, b; c, c; d, d, &c., and these will respectively be points in the curve; then with a fine pen and a steady hand let a line be drawn through all the points, and the line thus traced will be the curve of the parabola.

Having thus effected the delineation of the curve, it may be instructive to shew the method of calculating the parameter and the other quantities dependent on it, and for this purpose we must recur to the expression $VD = \frac{VC^2}{EV}$, an expression which, given in a specific form, becomes

parameter = ordinate × ordinate ÷ abscissa ..... (E)

And when this equation is brought into the form of a rule, it is as follows:—

RULE.—*Multiply the semi-base or given ordinate by itself, and divide the product by the axis or abscissa, and the quotient will be the parameter sought.* Or more briefly thus:—*Divide the square of the ordinate by the abscissa for the parameter required.*

Example.—The axis and base of a parabola are each 30 inches; what is the parameter, and what is the distance of the focus and the directrix from the vertex of the curve?

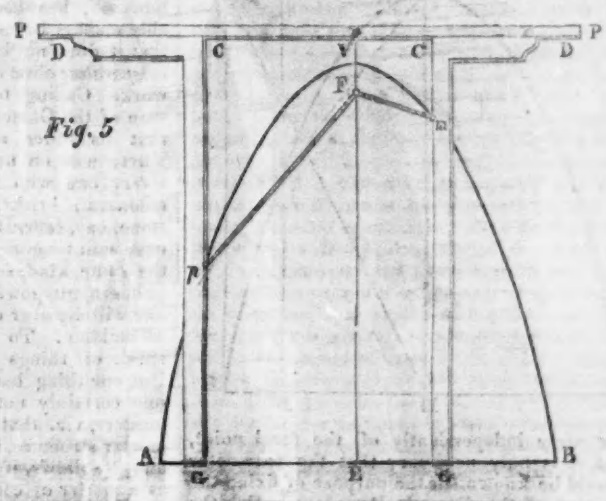
Here the abscissa is 30 inches, and the ordinate or semi-base is 15 inches, consequently by the rule, it is

parameter = 15 × 15 ÷ 30 = 7·5 inches,

and the fourth part of this is 1·875 inches, the distance between the vertex and the focus, and also between the vertex and the point through which the directrix passes. It therefore follows, that if the axis be divided into ten equal parts of 3 inches each, the several radii by which the points in the curve are determined, are 4·875, 7·875, 10·875, 13·875 16·875, 19·875, 22·875 25·875, 28·875, and 31·875 inches respectively.

There are various other methods by which the parabolic curve may be described, but the best and most expeditious of all is that in which it is generated by continued motion, and one mode of generating it in this way is as follows:—

Let AB, fig. 5, be the base of the parabola, and EV its axis; find the points F and n as in the last case, and through the point n so found draw the straight line PP, parallel to the base AB, and in consequence at right angles to the axis VE. Along the straight line PP let a ruler be fixed, and let one side of the square DCG, be brought into close contact with the lower side or edge of the ruler; then let a thread or cord FpG be taken equal in length to nE, the straight line which is made up of the axis VE and one-fourth of the parameter Vn, and let one end of this thread be fixed in the focus at F, while the other end is fixed at G, the lower extremity of the square DCG, the side CG being equal in length to the thread FpG. This being done, let CG, the side of the square, be made to coincide with nE, and let DC, the other side, be made to slide upon the ruler PP, while the thread is kept tight and close to the side CG, by means of the pin or pencil p; then the curve VpA, which is thus described, is one-half of the required parabola, and by only turning the square about, and causing it to slide in the opposite direction and on the other side of the fixed line nE, the curve VmB, which is traced



out by the pencil at m, will be the other half of the parabola.

We have now to prove that the curve described by this motion is the common or conic parabola, and for this purpose we must suppose the square to slide along the rule PP until the points G and p become coincident in the point A, in which case the thread pF will be the hypothenuse of a right-angled triangle, of which the base is AE and perpendicular FE.* Now the length of the thread being by construction equal to nE = VE + Vn, the hypothenuse of the right-angled triangle just alluded to, must be equal to the same quantity: but VF is equal to Vn, consequently FE = VE—FV, and by the property of the right-angled triangle, we have,

$$(VE + V\,n)^2 = AE^2 + (VE - FV)^2.$$

and from this by expanding and transposing the terms, we get

$$2\,VE \cdot V\,n + 2\,VE \cdot FV = AE^2;$$

but FV = Vn by construction, therefore by substitution it is

$$4\,V\,n \cdot VE = AE^2,$$

and since Vn is one-fourth of the parameter, the equation is

parameter × abscissa = ordinate × ordinate,

which, as we have already seen, is the equation of the common parabola.

There is another method of generating the curve by continued motion, which we think proper to introduce in this place, not that it is superior to the method just described, but because the same principle is applicable to the other sections also, thus reducing the system of conic construction to one uniform principle, which is beautifully calculated to shew the mutual relation of the several sections to one another.

Let AB (fig. 6), be the base of the parabola, and VE its axis, exactly as in the two cases preceding; upon the semi-base EB, and axis VE, describe the rectangular parallelogram

* We have omitted drawing a straight line from A to F in the figure, but the reader can easily supply it in his copy, which will render the steps of the reasoning more easily understood.

EBCV, and draw the diagonal EC; at C, the extremity of the diagonal EC, erect the perpendicular CD, meeting the axis EV produced in D, then is VD the parameter of the parabola to the axis VE; through the point D, and parallel to the base AB, draw the indefinite right line nP, which in this case will be the directrix of the curve.

Then, if the straight line nF be moved in a direction always parallel to the axis VE, and in such a manner that the extremity n, thereof, may always be in contact with the straight line Pn, and carry along with it the side Vn of the right-angled triangle mVn, of which the right-angle is moveable about the point V; then it follows, that the continual intersection m, of the straight line nF, with Vm, the other side of the triangle, does by this motion generate a conic parabola.

This method, it will be observed, determines

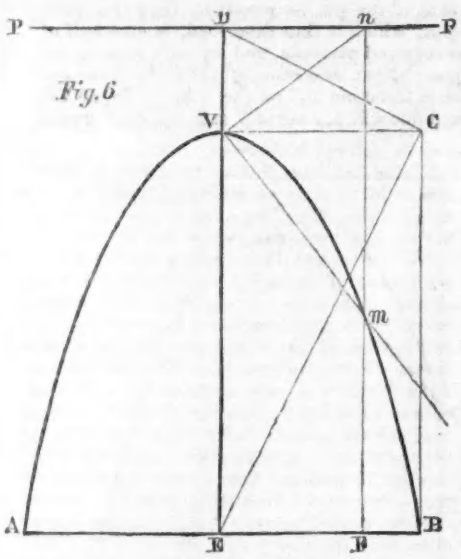


Fig. 6

the curve independently of the focal point, and it is only necessary that the parameter should be known for the purpose of fixing the position of the directrix Pn, along which the describing line must be carried; for in no other position will the moveable line intersect the curve, and the other side of the generating triangle in the same point.

If the moveable line nF be carried along parallel to itself, until the points m and F do each coincide with B, the extremity of the base, then will Vm become the hypothenuse of a right-angled triangle, of which the base is EB, and perpendicular VE; and this triangle will manifestly be similar, in that case, to VnD or VCD*; hence we have

VE : VC :: VC : VD.

But when the point F coincides with B, the semi-base EB is equal to VC, and, by construction, VD is equal to the parameter of the axis; hence it is,

abscisse : *ordinate* :: *ordinate* : *parameter*;

and, by equating the products of the extremes and means, we get

parameter × *abscissa* = *ordinate* × *ordinate*;

which is also the equation to the conic parabola; hence the truth of the construction is manifest. There are various other methods by which the curve may be generated; but since those which have now been exemplified are sufficient for every practical purpose, we shall not insist longer on the subject, having done enough to prepare the practical man for the important applications which are to follow.

T.

THE LOUVRE EXHIBITION FOR 1846.—The annual exhibition of the works of modern artists at the Louvre will be opened on the 15th of March next, and closed on the 15th of May. All works intended for exhibition must be sent in between the 1st and 30th of February.

ROME AND LONDON COMPARED.—The subject for the English essay at Trinity College, Cambridge, this year, is "Rome in the time of Augustus compared with London in the nineteenth century."

* The reader should connect the points F and B by drawing a straight line in his copy, such being omitted in the figure.

FOREIGN ARCHITECTURAL AND COLLATERAL INTELLIGENCE.

The "Cloaca Maxima" of Rome and the Egg-shaped Sewers of London.—If any thing can prove to us, that the very *structure* and aspect of ancient and modern times were different, the above two constructions can. In the first instance, we perceive a very small town—old, stern Rome, wherein a king (Tarquinius Priscus) considered it the scope and object of his life—or nearly so, to erect a structure, which, for ages to come, would afford cleanliness, and therefore comfort and salubrity (vitality) to his native city. The thing is done, and done thus, that the ultimate expansion of the capital of the world does not outstrip the *first*, primordial plan; and the *Cloaca maxima* of Tarquinius suffices for the Rome of Cæsar and Augustus,—even now, 2,400 years afterwards, a monument of admiration for every sensible beholder.—In modern times we manage things differently; we run after all and every sort of *private* comfort and ease, but whatever belongs to the province of public utility is a matter of chance, if not of corruption and jobbing. The subject of sewers, however, has been, in its main features, so ably managed by other hands in this journal, that it does not behove us but to make a few *comparative* observations relative to the Roman work. Calling to our minds what we have seen of the Cloaca maxima, we do not believe that its inner surface (brick) was *glazed*. There was no necessity for it, at any rate. Every one who has seen Roman (aye, even mediæval) bricks, knows what they are—stone, nay, *better* than stone, combining hardness with toughness; moreover, the mortar of the same kind, so much so, that nothing but (modern) gunpowder, or the crowbar and pick-axe will dissever or break this ancient *material* of building. To dilate on this would be to speak of things unattainable, or *nearly so*. But one thing has come out of late here, and one certainly not neglected by our Roman masters, viz. that sewers, like any brick and mortar structure, must have time to set, to dry, and to solidify, if they are to be *solid*. This, as a matter of course, has its physical, if not its chemical reasons. The watery portion of the carbonate of lime has to evaporate before it is capable of entering with the grit and sand, and altogether with the stone or bricks into a firm agglutination, or perhaps (chemical) amalgamation. The Roman king was, therefore, right in building his sewers *without* the bustle and the astounding *harass* and traffic of a capital of the world; and, consequently, there was no over-hurrying required, and the thing could go on in its natural and timely progress. But *our* sewers can *not* remain accessible to the influence of the air—the thing is impossible. They can neither dry, nor settle, but *must* be filled up, there and then. This anomaly has been clearly exposed, of late; but we fear that no remedy has been hitherto proposed, which can or would be resorted to, as there is no spare time at hand, either in Fleet-street, the Strand, &c.

Curious Appliances of the Cathedral of Orvietro.—A curious *solemnity* is yearly celebrated in the *interior* of this beautiful cathedral, in the Roman states, viz. the letting off of a huge set of fireworks. To crown this inconvenience, there are some exceedingly interesting old fresco pictures in the choir, by an unknown painter of Siena, as well as those, more known, of Signorelli, which, being acted upon in this *vandalian* manner for centuries past, have been coated with soot and dirt. Fortunately, two German painters, Messrs. Baltz and Pfannenschmidt, have of late applied themselves to cleanse these beautiful works; and thus it may be presumed, that this splendid old structure will no more be injured by the explosion of crackers and squibs.

The Paving of the City of Vienna.—The corporation of that metropolis have arrived at that persuasion, that most *solid* works are the cheapest. An exceedingly costly mode of paving has therefore been carried into effect, which, however, is calculated to last at least *a hundred years*. It consists of solid cubes of granite, about a foot square, all whose six sides are grooved, logitudinally and transversally, for preventing the slipping of horses, &c., thus ready for use on every side. It is calculated that as any of these get either worn out on one side, or even broken at a corner, it will be heaved out, and turned on the other side, and as the granite used at Vienna (similar to that mostly used here) is very hard, the experiment is sure to succeed. The expense, however, to pave in that manner, even the small city of Vienna, amounts to more than a million of florins (100,000*l.*). The only thing yet indispensable is the strong *ramming* in of these cubes, as it is well known that if merely one of the paving stones of a certain surface gets shakey, the whole connection is broken, and the *disease* will spread to a large extent. As, however, Vienna is unlike London, not so astoundingly *undermined* by a vast number of sewers, and water and gas pipes, the ramming in can be done with the necessary force and solidity.

Reorganization of the Royal Society of Belgium—A recent decree of the king completely re-constructs the above learned body, which, the fine arts being now added to it, will henceforth take the appellation of "*Royal Academy of Sciences, Literature, and the Fine Arts of Belgium.*" The Society will form three classes, viz. Physical, Mathematical, and Natural Science; Class of Literature, and Moral and Political Science; and Class of Fine Arts. Messrs. Roelandt and Suys are the new members of architecture; Geefs and Simonis of sculpture, &c. (*Novus ab integro nascitur rerum ordo.*)

Paris Guildhall.—Twelve statues representing Art, Industry, Science, and Commerce, have been of late placed on the balustrade at the top of the Hôtel de Ville, facing the Rue de la Tixéranderie; and three of the façades of this building are now ornamented in that way. When the Paris Guildhall is completed, it will contain about 500 statues, busts, and allegoric medallions.

An Art "voice" from Dresden.—Artists now complain of the want of encouragement; we ought rather to do so, of so *much* wrongly applied—because, when ever was it before, that cartoons, never to be executed, or oil-paintings, without a spark of thought and feeling, exhibiting, moreover, an utter lack of technical knowledge, have been paid for so highly as they are now? It could be therefore proved to a nicety, that beside the narrow-mindedness and the mere trade feelings of most German artists—it is especially the surfeit of indiscriminate encouragement, and the state of the academies, which drag down art, and make it proceed within the most narrow and commonplace limits. Amongst the Dresden painters, there is but *Schwind* who can be said to be possessed of that astounding rapidity of technicism, by which those great stars of mediæval Italy were so conspicuous. It is useless to dream of, or pant after geniality, as long as the merest A B C of composition has not been attained.—*Kunstblatt.*

A Pentonville Model Prison at Berlin.—This huge building is now approaching its completion, surrounded by high walls and turrets. There will be room for 520 prisoners, and a complete, very complicated, separation has been effected; but the building has turned out a very expensive one, so much so that the mere *interest* of the capital expended will bear a proportion of 20 dollars (4*l.* 10*s.*) for each prisoner.

Art-Museums in the German University Towns.—According to the programme of the Bavarian University of Erlangen, the Art museum is open twice a week, *one* hour each time. The libraries, also, are restricted within the same narrow limits—but then students and others may take books home.

Erection of a New National Gallery at Dresden.—The huge, albeit unseemly building, the Picture Gallery of Dresden, endeared still to any sensible person, as the, for so many years, shrine of such sacred objects, as the Madonna del Sisto of Raphael, and other incomparable works, is now likely to be replaced by a building more in accordance with the demands of our age. It was his Majesty of Saxony's *Government* which, on its own free will, brought the necessity of this improved building before the Chambers, which, no doubt, will assent to it cheerfully. The costs are estimated at 350,000 thalers, about 37,000*l.* English coin, but equivalent to 70,000*l.* in Dresden. As that kingdom has a surplus of revenue, 200,000 dollars will be taken from that source, and the remainder placed on the budget of next year.

Sliding-scale in the Payment of Public

Officers.—A very curious regulation—the first in its kind, but of the most striking depth and justice—has just been enacted by the King of Bavaria; certain additional per centage being granted to the *minor* Government officers for the present period of apprehended scarcity and want, of from 10 to 25 per cent. But this is regulated by a sliding scale, viz., the *greater* the salary, the *less* the per centage; and least but not last, this increase is also graduated as far as it concerns bachelors, or married men, or widowers with children, &c.

Completion of the Works at the Jardin des Plantes at Paris.—The *Journal des Débats* gives the following list of the above works, for which the credit will be asked at the next meeting of the Chambers. Foundations and iron railings for inclosing all the parks—building of a new park for the lions—the building of a *locale* for the amphibious mammalia and the reptiles—new and expensive fosses for wild boars. A new foot-path is to be laid all along the walls of the gardens between the Quai and Cuvier-street.

French Officials disclaiming any Connection or Concern with Private Companies.—Mr. Hericant de Thury, Inspector-general of Mines and Councillor of the State, has addressed the French official journals in a very tart letter—saying that his function as a Government officer does not *permit* him to be the member of any company, as has been erroneously stated. J. L——y.

CHRIST CHURCH, PLYMOUTH.

This fabric being completed, though not yet consecrated, we avail ourselves of a description of the building from the *Plymouth Journal*:—The general disposition of this edifice is the same as was adopted by Mr. Wightwick in Trinity Church, his object being to put his employer to the expense of no more ground than is actually occupied by the building, and to avoid the cost of any external ornament beyond that which gives architectural character to the street-front, the sides and back of the church being concealed by adjoining and surrounding houses. Of course there are no windows in the outer side walls, the main body of light being obtained by means of *clerestories* over the arcades of the nave. The architect is known to be averse to the use of internal pillars where they can be avoided, but in this case (as at Trinity), where there is a great lateral extent and galleries are imperative, they would have been necessary, even if the building had been insulated. The west front exhibits a lofty gabled centre, flanked by octagonal turrets 64 feet high, and winged by two lower gabled compartments, having angle pinnacle buttresses, reaching a height of above 40 feet. The octagonal turrets terminate with open lanterns, surmounted by crocketted spirettes, resembling those of Magdalene College, Oxford. The three doorways, respectively seen in the central and wing compartments, are adapted from the beautiful originals seen in Tatershall Church, Lincolnshire. The tracery of the great east and west windows is from Aylsham Church, Norfolk. Over the wing doors are long and narrow single-light windows, with quatre-foil apertures above, and over the large west window is a loop opening, ventilating the roof. All the carved work of the west front is of Caen stone, the plain portion of the masonry being of our local limestone. The front is 72 feet in extent, and 50 feet from the pavement to the top of the gable. The style is Tudor Gothic.

Internally, the church exhibits a nave of five arches in length, surmounted by a clerestory of coupled windows, the lower timbers of the roof being left open to view, so as, in a general way, to resemble that of St. Mary's at Cambridge. The width of the nave is 31 feet; the height is nearly 40 feet; the aisles (including the thickness of the pillars) are 18 feet 6 inches wide, and the galleries within them are so kept back, as to leave the ascent of the pillars unimpeded. There is also a gallery at the west end, with staircase on either hand, occupying the depth of one arch of the nave, which is therefore a blank. At the east end of the nave an arched opening 32 feet high and 16 feet broad reveals the communion recess, which, from the confined space of the ground, is necessarily only 9 feet deep. The pulpit is of novel construction, approached by a door from the vestry lobby. The font (of Caen stone) is near the western mid-entrance. The church has been completed, including 85*l.* for extras, for 6*l.* 3*s.* 6*d.* above the architect's estimate—the total cost of the building being 3,475*l.* The accomm dation is for 1,120 sitters, of whom 35 may hereafter have to make way for an organ. The clear internal dimensions of the church are, from east to west 87 feet, and from north to south 68 feet.

WESTMINSTER COURT OF SEWERS.

On Friday, Dec 5th, a Court was held. The collectors presented their reports, and the clerk declared the cash at the banker's to be 17,176*l.* 2*s.* 7*d.* Mr. Phillips was ordered to present to Mr. Dowley a report of the most faulty sewers i n his districts to which he alluded in his report in the Book of Informations.*

A long discussion took place between some applicants for leave to enter a sewer built by Mr. Ponsford, who produced to the Court his account of the cost to him of the sewer, 592 feet, 811*l.* 10*s.* 6*d.*; the digging he charged at 3*s.* a cubic yard, the brickwork in mortar at 15*l.* 4*s.* 6*d.* per rod, and the brickwork in cement at 17*l.* 3*s.* 6*d.* per rod. The Court thought his claim excessive, and ordered the surveyors to measure the work, and the question was adjourned to a future day.

The question as to works likely to be done and materials to be required, was again discussed, and Mr. Allason having assured the Court that Mr. Bird had had sometimes two and sometimes three establishments, Mr. Leslie carried the Court with him, by shewing the vast amount of the works above 50*l.*, already provided for by special contracts, the expense of cleansing sewers and gullies in the antiquated way, without a check on the expenditure, amounting to 2,000*l.* per annum, and deducting this, included in his plan as a labour account, from the works above 50*l.*, it left a comparatively small amount of works to be done by the new establishment, and which it was still further proposed to reduce by a tubular system of gullies. The honourable commissioner stated, that every foot of the present gully drains took twenty bricks, and the average cost was one penny per brick. The surveyors' report was then read, without the schedule of materials, and Mr. Leslie moved, and was seconded by Mr. Thomas Leverton Donaldson, "That the surveyor be authorized to procure the necessary materials and other matters contained in his report, from time to time, and report at each meeting of the Court the amount so supplied." Carried *nem. con.*

Mr. Wm. Donaldson's motion to prevent the clerk from printing any paper without the order of the chairman then came under discussion, in the midst of which it was moved and carried that the Court do now adjourn.

Lighting Mines by Electricity.—M. Delarive has succeeded in obtaining a brilliant light for lighting mines by the galvanic battery. His pile is composed of several concentric cylinders, of copper or platina, separated by porous cylinders, and forming a series of four or five couples. An amalgam of liquid zinc, or, what is preferred, an amalgam of potassium, is the positive metal; and a solution of sulphate of copper, for copper cylinders, and a chloruret of platina, for platina ones. The difficulties in maintaining constant light have been overcome by employing small hollow cylinders of coke, similar to those used in Bunsen's pile, but smaller, and arranged like the wicks of a lamp. A ring, or disc, of metal is placed above these, and of the same diameter; and the electric current thus passes between the two. The current must be made to pass from the coke cylinder, that the particles of carbon which are carried off may fall again with their own weight. The whole is placed in a glass globe, which must be hermetically sealed. There is no occasion to form a vacuum in it, as the small portion of oxygen is so soon absorbed; but it must be carefully excluded from the outer atmosphere. The pile is fitted with two metallic wires—one communicating with the cylinder of charcoal, and the other with the metallic conductor.—*Post.*

* Vide *ante*, page 493.

CHELSEA IMPROVEMENTS.

Sir,—I observe that you are in the main favourable to the proposed improvements in Chelsea, and intend keeping your eye on them, in order to give us the advantage of some observations hereafter.

My object in writing is, to say there are strange whispers abroad, that many of the alterations are projected solely with the view of improving the estate of my Lord Cadogan, and that parish money will actually be spent in doing that which his lordship would himself do for his own benefit. There are several things which seem to confirm this, and I do hope, for the sake of numbers of the ratepayers who read your now influential journal, that you will inquire into this matter.

Chelsea. A Church Trustee.

SOME EFFECTS OF THE RAILWAY MOVEMENT.

We find the following suggestive remarks in the *Railway Review* of the current month:—

"We are not opposed to railways or railway enterprise. On the contrary, we hold that the present railway movement, reckless as it is, will produce a revolution in this country as comprehensive, as sweeping, as important, as any political, moral, or economical revolution that yet has been enacted in the world. An entire new race will spring up with the entirely new *genera* of roads. A new opening for the exercise of intellect, a new road to eminence, and an infinity of space and *materiel* for the employment of men's energies will be, nay *is* created, by the new system. We are present at the birth of a new aristocracy. And as force was the patent by which the old won and held its lofty position, so in these days of ours, will a similar, a virtual position, far more influential, be won and held by the controller of force—Intellect. Wealth, possessions, unassisted by mental power, if only of the lowest order, is in the descending scale, while comparative poverty, backed by wit, intelligence, and that quality which will, if it exist, manifest itself in whatever it be employed on—Genius, is rapidly ascending. The director or chairman of a board must gain and maintain his rank by talent, or he is soon discarded. He must know and do. He must think only in-so-far as it shall lead to profitable action, and not enter the regions of impalpable speculation. He must work hard if he do his duty, he must act honestly if he would preserve his reputation. He cannot uphold himself in the company in which he has thrust himself by acting idleness. There all is bustle, activity becomes absolutely necessary to self-preservation; if he be inert, he will be infallibly crushed among the cogs and swift-whirring wheels in that scheme of perpetual motion, which he has attempted to erect, guide, and sustain. No; shrewdness, application, and perseverance are the requisites of this new order. We will say nothing of lawyers employed in railway matters, they abound in all things, float in all degrees of density. They necessarily form important adjuncts to all our affairs. They have provided a complication so complicated, that as fast as one unravels another confuses it, thus furnishing themselves with an endless but profitless(?) employment. A far more important class is created in engineers and surveyors; that is, taking our view of the railway revolution—namely, as conducing to the progression of man, and furnishing wholesome and elevating occupation for the mental energies and powers. This is an outlet, not for the sons of our aristocracy, like the church and the army, but for the aspiring and intelligent among the poorer middle classes, and the humblest poor themselves. Here no patronage, but that of genius, no influence, but that of known and experienced ability to do his work, can obtain the man of science employment, reputation, and substantial reward. Here no backstairs intrigue, no factious and party interference can avail. That man who is the most *able*, he who carries about him the most weighty and legitimate qualifications for office, honour, and its ultimate rewards, *he* is the man who will triumph over conventional rank and conventional influence. Hence then there is hope for the young man who would live a life of labour in the full exercise of his intellectual faculties; who would rather have employment at half the value, if it be but ob-

tained by his own ability, than twice the sum gained by the intercession of another, for doing nothing but that which is level with the commonest capacity. It is in this point of view that we estimate so highly the potent influence for good in the railway revolution. It promises intellectual exercises and labours for our population. It is mind that is evoked by the spread of steam communication. It is mind, though not of the highest order, that will rule the new confederacy. It is mind, nature's darling, her highest effort, that is, and will be called into play to an extent hitherto unequalled. It is stirring even the country squires; exciting the more active, but still plodding citizens of the country towns. They are anxious, fevered, agitated, and at present unequal to the hour. Hence many are the prey of swindling cormorants, who, thanks to the evanescent nature of dishonesty which cannot long retain one form, will be a short-lived race."

RAILWAY INVESTMENT.

Under this head, the *Westminster Review* for the present December has an article which will be read with much interest by the hundreds who are at this moment contemplating the state of the share market with fear and trembling. The object is to shew that the cry of "Where is all the money to come from," is unnecessary and easily answered, and that the present depression must be temporary.

"Let us note," says the writer, "that from whatever cause they may arise, the alternations of confidence and distrust in affairs of commerce are as constant and certain as the ebb and flow of the tides. Success has always led to overtrading, sometimes in tea, sometimes in tallow, and now in railroads, and overtrading and panic have succeeded each other at intervals of scarcely five years apart, we believe from the days of the merchants of Tyre and Sidon down to our own. It may, therefore, be assumed as an axiom, that a panic is the safest time for investment. Property bought at a price greatly below its average value can hardly fall lower, and may, indeed in many cases must, gradually rise. A knowledge of this fact is the secret of the success of large capitalists. They buy when there are no other buyers; and when all the world are eager to buy, they keep their heads cool, and sell. At the present moment, it may seem a bold thing to recommend railway property as securities, but we have no hesitation in doing so, and in adding our opinion that an investment in lines well selected, at existing prices, would ultimately be found a far more prudent step than the purchase of 3 per Cent. Consols at 94.

There is but little analogy between South Sea and Mississippi schemes and railway projects. Let us clearly understand our position. We have arrived at a new epoch in the history of the world. A new element of civilization has been developed. As was the invention of letters, as was the printing-press, as was the steam-engine, so is the railway in the affairs of mankind. It is a revolution among nations. A moral revolution as affecting the diffusion of knowledge, the interchange of social relations, the perpetuation of peace, the extension of commerce; *and a revolution in all the relations of property.*"

We have already pointed out the following important fact (so far as we know we were the *first* to do so), but it may, nevertheless, be usefully repeated:—

"The change now in progress is that of superseding stone roads by iron roads. The first road was a track; the second one made with hard and rough materials, sometimes paved, and more frequently thrown loose upon the ground; the third a macadamized road; and the number of private Bills applied for between 1829 and 1833, for roads of this construction was 340.* There are 27,000 miles of turnpike-roads in Great Britain alone, and the public roads of all kinds (including both cross country roads and turnpike roads) in Great Britain and Ireland extend to a length of somewhere about 150,000 miles! We have now to convert these stone roads, or the greater part of them, into iron roads as speedily as may be practicable, and possibly (as the disposition to travel increases with facilities of travel) find room for twice the number. This is the work Englishmen have set themselves to do, and in this generation, or the next, they will do it."

* Porter's Progress of the Nation, vol. iii., page 159.

BUILDING STATISTICS.

Sir,—Will you have the goodness to state how many bushels of cement, and how many bushels of sand, are consumed in a rod of 272 feet of brickwork, reduced to 1½ brick thick.

When cement only is used; when cement, two-thirds and sand one-third; when cement one-half and sand one-half, or in equal proportions; when cement one-third and sand two-thirds.

Several books name the quantity of cement to a rod, but all that I have seen are useless, from not naming the proportion of sand on which the calculation is founded. Builders differ so much in their statements, and some are so exaggerated, that it would be more satisfactory to your readers to have data on which they can place more reliance. A few of these sort of particulars, *provided the data may be implicitly depended on*, would be of great use in estimating; such, for instance, as the following:—The number, length, and scantlings of pantile laths in a bundle; the number, lengths, and sizes of single and double laths in ditto; the number, sizes, and weights of various materials in certain known quantities of work: the lengths, sizes, and weights of hoop-iron per bundle for bond and iron tongues; the weights and sizes of nails, spikes, and screws, 6d. 8d. 10d. &c.; the quantities of lime, hair, and sand, in one coat render or lay: ditto in a yard of floated work, one coat and two coats, and in hods; weights, sizes, and qualities of tiles, slates, &c.

These, and others, would be extremely useful in a tabular form. But at present I seek most for information as to cement and sand.

Dec. 6, 1845. An Old Subscriber.

TOWER HAMLETS COMMISSION.

TENDERS FOR SEWERS.

Sewer from Hackney Wick to Grove-street: 4 feet by 2 feet 6; length, 4,450 feet.

Stewart	£3,860 0
Munday	3,695 0
Livermore	3,629 0
Crook	3,498 0
Ward and Son	3,465 0
Redding	3,357 19
Smith	3,347 0
Curtis	3,294 0
Lee	3,292 0
Edwards	3,250 0
Jay	3,187 0
Blackburn	3,115 0
Hill and Son	3,086 0

HOLBORN AND FINSBURY COMMISSION.

Haggerston-road: second size sewer; length, 600 feet.

Hill	£480 0
Smith	472 7
Johnson	425 0
Jay	417 0

Museum of British Antiquities.—In reply to Mr. Hawkins' letter to the Institute of Architects on this subject, and which appeared in The Builder, the following resolution was passed by the council at their last meeting:—"That the council have received with much satisfaction the communication from Edward Hawkins, Esq., the keeper of the antiquities in the British Museum, in which the assistance of the members of the Institute is solicited in preserving antiquities found in this country. The council, fully recognizing the importance of the object advocated in the letter of Mr. Hawkins, and heartily concurring with the views entertained by the committee of the Archæological Institute and at the British Museum, recommend to the members of this Institute to exert their influence, individually as well as in their corporate capacity, to prevent the destruction and dispersion of antiquities in all cases of discovery that may fall under their notice; and, further, it is the desire of the council, by this resolution, to call forth from the members of the profession in general that public expression of interest in the promotion of archæology which may best meet the wishes and suggestions conveyed to them in Mr. Hawkins' letter.

New Books.

The Archæological Album; or, Museum of National Antiquities. Edited by T. Wright, M.A.; illustrated by F. W. Fairholt, F.S.A. Chapman and Hall, Strand.

This elegant volume has attained considerable notoriety from the fact, that it was the cause of the late unfortunate difference in the British Archæological Association. Independently, however, of any adventitious celebrity, it has sound and legitimate claims on public attention, and is well calculated to carry out the Dedication (to Lord Albert Conyngham), which says it was "compiled with the hope of making more popular" antiquarian science. "Compiled" is too modest a word; inasmuch as it contains a great deal of original writing, and exhibits much varied learning.

It commences with an account of the meeting of the British Archæological Association, at Canterbury in 1844, with a notice of the various antiquities in and round that city; and concludes with a brief mention of the meeting at Winchester, in August last. The titles of other papers given are as follows: Ancient Bedstead in Turton Tower; Obsolete Punishments; Old Mansion in Houndsditch; History of Art in the Middle Ages (a very valuable paper); Symbolism in Ecclesiastical Architecture; Burgh Castle, and the Round Towers of Suffolk; Ancient Street Architecture; Patine in Cliff Church; the Early Use of Fire-arms; the Romans in London; Silchester; Burlesque Festivals of the Middle Ages; Monument of Joane, Prince of North Wales; The Fabulous Natural History of the Middle Ages; The Moat-House, Ightham, Kent; Early Use of Carriages in England; Saxon Barrows; and Illustrations of Medieval Antiquities, from illuminated MSS.

Mr. Wright's well-earned reputation as a scholar is widely spread, and led to his election some time since, as corresponding member of the Institute of France. In the present volume he has shewn, that amidst abstruse studies, he has not neglected the art of conveying information pleasantly, and of rendering what have been termed "dry" matters entertaining and attractive. The volume is profusely illustrated with etchings and woodcuts by Mr. Fairholt, who is taking a first place in his profession as an antiquarian draughtsman: nor is he only a draughtsman; a long series of papers on Costume, published in the *Art Union*, and which it is to be hoped will hereafter form a volume, shew that he is an industrious and intelligent antiquary. The title-page of the *Album*, "Specimens from Illuminated MSS," is a beautiful sample of chromo-lithography, executed by Hanhart.

Correspondence.

DRAINAGE IN PRIVATE HOUSES.

Sir,—Seeing in the pages of The Builder some remarks as to the construction of sewers and drains, I am induced to make a plain statement of facts as connected with drainage in many of the back streets and courts, now very densely populated, of which I think some remedial measure ought to be speedily adopted. I mean in regard to the drainage of old buildings as well as new buildings, over which a very great portion of the occupiers have no control, being in some cases disabled or incapacitated by poverty, and in others not able to get at the evil in consequence of its proceeding from the bad state of the cesspool or drains of the adjoining property. I myself am in this situation. Having been very unwell for the last two or three years, my medical adviser recommended me to have the drains cleansed and trapped, to keep back the smell. I have acted upon his advice at, to me, a great expense. I now find the evil to be in the adjoining property. I have applied to the landlord, but get no redress. I have also applied to the parish authorities—they cannot interfere, it being a private, and not a public nuisance; on the same plea the magistrate cannot assist me, I can go to the sessions, but having no funds, I am at a stand-still; and I assure you, Mr. Editor, that this is by no means an isolated case. An incoming tenant can have no idea of the nuisance until he is fairly in it, and then he is a ruined man, as the lodgers on whom he depends to make up his rent, &c.,

are chiefly weekly, so that they are no sooner in than, finding the evil, they quit. Not so with the tenant of the house; he is booked for a year certain, or if he have taken a lease, he must stop the term, or transfer the lease to whomsoever he can get to take it, with all the benefits belonging to the same. Or, as is the case in many instances, it makes a rogue of a once honest man.—I am, Sir, &c., J. S.

*** We have received several urgent complaints against the state of the drains in the neighbourhood of Lincoln's-inn-fields.

Miscellanea.

The Cathedral and Parish Church of St. John's, Antigua.—The ceremony of laying the corner stone was performed on the 9th of October, by his Excellency Sir Charles Fitzroy, the Governor-in-chief of Antigua, in the presence of a large attendance, including many persons of distinction. *Felix Farley* gives an extract from the *Antigua Mirror*, saying that the cathedral will be in the form of a cross, and equal to accommodate 2,200 persons. The entire length, 156 feet from east to west, and 50 feet in width. The length of the transept, 104 feet from north to south, and width 46 feet. Two towers will be erected at the west end, each 70 feet high, crowned with cupolas. The interior ceilings of the aisles will be flat and panelled, and that over the nave will be coved and panelled, and supported by 64 columns and pilasters; the height of ceiling 30 feet. The building will be of freestone, with an inside frame of hard wood, lined with pitch pine, the whole of which will be varnished. The windows will be glazed with stained glass; the seats will be of pitch pine; the pulpit, lectern, bishop's throne, and stalls will be of mahogany; the style of architecture, Roman. It is the opinion of Mr. T. Fuller, the architect (son of Mr. Fuller, of Bath), that should nothing impede the progress of the work, the building will be ready for consecration in two years from the present time. The building committee wisely imported twelve carpenters and eight masons from England, by whose assistance the work will be much accelerated. The workmen employed amount to 170, and are under the superintendence of Mr. W. Roue, of Bristol, clerk of the works.

The Cathedral at Fredericton, New Brunswick.—The Bishop of Fredericton, on the occasion of laying the foundation-stone of the Cathedral at Frederiction, writes as follows:—"In ancient times the cathedrals of Old England, which are still the glory and ornament of that country, and are now more visited and admired than ever, were built by the bishops of the respective sees, assisted by the multitude of the faithful, who rejoiced to pour their offerings into the treasury of God. In faith the work was begun: the builders died, and left their work unfinished, but others took it up, and by God's help brought it to an end. But the colonies of England, though everywhere dispersed, knew no such glory; and for a long season the gathering in of the 'unrighteous mammon' seemed to be the sole end of colonization. At length the note of preparation is heard, and in more than one colony God's servants think upon the stones of His Church, and 'it pitieth them to see her in the dust.' New Brunswick is one of the first colonies in which the foundation-stone has been actually laid; an event the more remarkable, when we reflect that no such work has been begun since the Norman conquest, that is, for the last 700 years; a work in which the goodness of God is manifestly made known towards us." The day on which this occurrence took place was the 15th of October, and nearly 3,000 persons took part in it.

Bridgewater House.—We understand that the rebuilding of Lord Francis Egerton's mansion, in Cleveland-square, formerly belonging to the late Duke of Bridgewater, is to be commenced early in next March. Mr. Barry, the architect of the new Houses of Parliament, is intrusted with the erection, that gentleman having designed the plan of the intended new mansion. A paragraph has lately appeared in a morning paper, asserting that the Hon. Mr. Liddell, son of Lord Ravensworth, was the architect. Such, however, is not the fact, that gentleman having only made a model some years back, which was not adopted.—*Herald.*

Engineers' Almanack.—Simpkin and Marshall have just published for the author, Mr. Jabez Hare, a very useful illustrated sheet almanack, containing, in addition to the usual information of the calender, a variety of engineering statistics, of considerable importance, and which will be most useful for reference—such as a table to find the areas and circumference of any circle, from 1 to 100 inches, of which the diameter is given; a table of the pitch of wheels, breadth, and thickness of teeth, and strength in number of horses' power, going at the rate of three, four, six, and eight feet per second; a table for calculating the pitch of a toothed wheel, when the radius and number of teeth are given. Specific gravity, strength, cohesiveness, stiffness, and resilience of various woods from Tredgold. Hardness and specific gravity of various stones, weight of iron, number of bricks to any piece of work, relative value of British and foreign road measures, expansion of air and water by heat, &c.

Vacant District Surveyorship.—A vacancy has occurred in the district of Shoreditch and Norton Falgate in consequence of the death of Mr. Matthew Warton. Two candidates are already in the field, viz. Mr. Robert Warton, son of the deceased gentleman, and Mr. H. E. Kendall, the present surveyor of the district of St. Martin's-in-the-Fields, and St. Anne, Soho.

Greyfriar's Church, Edinburgh.—The restoration of the new Greyfriar's Church, Edinburgh, is being proceeded with.

Tender.

For building a Fever Hospital in the Land of Promise, Hoxton, for the parochial authorities of St. Leonard's, Shoreditch; Mr. Wm. Tress, architect.

Turner	£2,500
Trego	2,268
Henry Johnson	2,256
Gerry	2,187
Norris	2,177
Jay	2,169
Smith	2,130
Wood	2,095
Lawrence	2,094
Merser	2,092
Barr	2,080
Curtis	2,044
Reeves	2,003
Cotsworth	1,998
Ward and Son	1,994
Hatswell	1,951
Cooper	1,947
Ed. Carter	1,918

The lowest tender was accepted.

NOTICES OF CONTRACTS.

[We are compelled by the interference of the Stamp Office to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers, however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent-garden.]

For performing the bricklayer's, carpenter's, slater's, plumber's, painter's, and glazier's work at the St. Marylebone Workhouse for the year ensuing.

For the execution of works on the Newcastle and Darlington Junction Railway, being a length of about 5 miles; also for an extension of the same line to Monkwearmouth, being about three-quarters of a mile in length.

For the execution of the works on the Auchinleck and Ayr Branch of the Glasgow, Paisley, Kilmarnock, and Ayr Railway, in length about 14 miles. To be divided into two or more contracts.

For the execution of the works in connection with an extensive excavation at Edge Hill for the Grand Junction Railway Company.

APPROACHING SALES OF WOOD, &c.

BY AUCTION.

At Smockington, a quantity of capital ash and larch poles; also of ash, elm, and beech timber trees.

At Withybrook, a quantity of ash poles, and ash and elm timber trees.

At Willoughby, Warwick, 300 valuable oak, ash, elm, and other timber trees, now growing.

At Sandy, Bedfordshire, a fall of very choice straight larch and Scotch spires.

At Audley End, Saffron Walden, about 400 timber trees, consisting of oak, ash, elm, beech, and sycamore, also a quantity of larch and ash poles.

At Halstead, numerous elm, ash, oak, willow, and fir trees.

At Brentwood, Essex, about 600 capital ash, birch, oak, elm, and alder poles and seconds of handsome growth.

At Madingly, near St. Ives, 300 lots of oak, ash, and elm timber trees, some of which are very large, also a quantity of useful poles.

At Highfield Waresley, Huntingdonshire, 260 elm and 120 ash trees, &c.

At Meldreth, Cambridgeshire, about 70 ash, elm, and other timber trees.

At Hinxton Hall, Cambridgeshire, a quantity of ash and other timber trees, including a palm tree, &c.

At Besford, near Pershore, a considerable quantity of very capital timber, consisting of oak, elm, and ash trees, of large dimensions.

At Chewton Keynsham, Somersetshire, 768 maiden oak, ash, and elm timber trees, of very superior quality and mostly of large dimensions.

At Homingsea, an extensive fall of ash, elm, willow, and poplar trees, also a quantity of excellent ash poles, elm and other spires, &c.

At Halse, Somerset, about 250 capital maiden oak, ash, and elm timber trees of long lengths and large dimensions, now growing.

TO CORRESPONDENTS.

"W. P. R."—*The one arbitrator cannot appoint the umpire, nor proceed further in the reference. When two arbitrators are named with power to appoint an umpire, the first step should be to make that appointment. No act on their part is binding until that be done. Something of course will depend on the wording of the submission. Should the matter be brought into a court of law, the refusal of the one party to appoint an umpire after agreeing to the reference would tell strongly against his case.*

"Puzzolana."—*A correspondent wishes to know present price of puzzolana, in natural state and screened.*

"J. L." (Bond-street).—*The plan does not seem to have much advantage over Dr. Arnott's valve, and is much more difficult of execution.*

"A. T. K."—*It is impossible yet to say how the referees will view buildings brought under provisions of the Act, by not being completed before January 1st next. We are inclined to think that where they are found perfectly safe, and not directly contrary to the spirit of the Act, no great alterations will be called for. To his second inquiry we will give attention.*

"L. O."—*A district surveyor could refuse to permit use of artificial stone for external walls; although we know some have allowed its introduction. If the material be sound, the referees on application, would doubtless authorise the use of it.*

"S. Henry."—*The subject on which he has written is now less attractive than it was, and may be discontinued. We like his new proposal. If he will send us a specimen, we will then say how often we could receive it. Communications should reach us on the Wednesday.*

"Architectural Modelling."—*W. Burgess, of Oundle, models specimens of ancient architecture in stone, and offers his services to the Archæological Societies. If he will send an example to our office, it shall be made public.*

"E. M."—*Rev. J. W. Pugh, Llandilo.*

"Egg-Shaped Sewer," and "Court of Sewers"—*Several useful communications on these subjects are unavoidably put aside, as they would occupy more space than we are able to devote to one subject.*

"E. S." (Wisbech).—*Thanks. It shall be engraved.*

"X. Q. Z."—*There is an Act in existence to prevent annoyance from the smoke of engine-chimneys; whether or not it would apply to our correspondent's case we cannot judge from his letter.*

"C. C."—*The term "ashlar" applies to common or free-stones as brought from the quarry, of different lengths and thicknesses. Also to the facing given to square stones on the front of a building.*

"H. A. W." (Blackburn).—*We will look to the work in question.*

"D. E. J."—*We have great confidence in the cement named. Before using it, it is absolutely necessary that the work be dry.*

"C. W. F.," "W. P.," "A. J. G." (Sudbury), "Freemasons of the Church," *next week.*

*** Correspondents are requested to address all communications to the Editor.

Correspondents should bear in mind that The Builder is published early on *Friday* morning. Communications which reach us later than Wednesday cannot appear till the following week.

ADVERTISEMENTS.

THE GENERAL WOOD CUTTING COMPANY, TIMBER and DEAL SAWING and PLANING MILLS, Belvedere-road, Lambeth, near Waterloo-bridge.—SAWING in all its branches executed with the greatest precision and despatch. PLANING by the most approved Machinery, reducing the Boards to a parallel width and thickness, and grooving or matching with undeviating accuracy. The operation economizes time, money, and material.

MUIR'S PATENT PLANING MACHINERY.

SAW MILLS, GILLINGHAM-STREET, PIMLICO.

TIMBER of any Size, PLANK, DEALS, and BATTENS, &c. Sawn on the most approved principle. Boards, &c., Prepared, Matched, and Grooved, by Muir's Patent Machinery. The Mills have all the advantages of navigation and water-carriage, being connected with the Thames by the Grosvenor-canal. Goods fetched from the docks and carted home free of charge.

Address to HENRY SOUTHAM,
Saw Mills,
Gillingham-street, Pimlico.

GRAINING COLOURS AND LIQUID WOOD STAINS.

HENRY STEPHENS begs to call the attention of Architects, Builders, House Decorators, Painters, Cabinet-makers, and all those engaged in the erection of churches where the appearance of oak is desirable, and those also who are employed in the revival of old carvings, faded furniture, or other ornamental wood work, to his GRAINING COLOURS and LIQUID WOOD STAINS.

The graining colours are prepared in a damp state, and upon so true a principle, that the workman cannot fail in obtaining the natural colour, nor of giving to the work the same effect and appearance at all times. The difficulty of producing a true colour and of preserving the same uniformity with the admixture of earths and oxides, which are the ingredients used in graining, has long been acknowledged. This difficulty is at once removed by these preparations, and the grainer is enabled to confine his attention to his art in graining, without being perplexed in proportioning and mixing his colour.

The LIQUID STAINS are solutions of colours which not only carry additional stain on to the various woods on which they are employed, but when used on the particular wood whose object it is to revive, it combines with and heightens the natural colour inherent in the wood, and is therefore a valuable acquisition to the DECORATOR and to the RENOVATOR of old oak or other carvings. They are also capable of giving colour to the sappy and defective parts of veneers and fine woods used by cabinet-makers and others.

In the decoration of churches, castles, baronial halls, and mansions, in which are often found beautiful specimens of ancient carvings; when the colour of the wood is changed and faded, these liquid stains will be found particularly serviceable.

They also impart to woods of inferior character and of soft texture, such as beach, birch, pine, deal, &c., the colour and appearance of such woods (whether oak, mahogany, rosewood, &c.) as it may be designed to imitate, and thus save the expense of more costly materials.

The above preparations for graining and staining for purposes of imitation and of revival, are prepared by HENRY STEPHENS, and may be obtained at 54, Stamford-street; of Mrs. ROWLAND, Painter and Glazier, 3, Broad-street, Golden-square; and at the Office of "THE BUILDER," 2, York-street, Covent-garden, at which places specimens of their application may be seen.

BRITISH and FOREIGN SHEET GLASS, for Horticultural purposes, Sky-lights, &c. may be had at JAMES BROMLEY'S 315, Oxford-street, London, at the reduced prices, also Microscopial Glass, French Shades, Plate and Crown Window Glass. J. B. will be happy to furnish Lists of Prices, or any other particulars that may be required.

DUTY OFF ORNAMENTAL WINDOW GLASS.

CHARLES LONG begs to inform his Friends and the Public, that he can now supply Ornamental Glass from 1s. 3d. per foot superficial; and borders from 9d. per foot, run; and having just built two of the largest Kilns in London, is enabled to execute extensive Orders with unprecedented dispatch, 1, King-street, Portman-square.—Terms, Cash only.

TO THE PLATE-GLASS TRADE.

THE BIRMINGHAM PLATE and CROWN-GLASS COMPANY beg to call the attention of the Trade, that their LONDON WAREHOUSE, 141, Fleet-street, is now open for the sale of their Crystal Plate-Glass, which for Brilliancy and Colour will be found to stand unrivalled by any other manufactory.—All orders, addressed to B. MOSS, London warehouse, or to the works, Smethwick, near Birmingham, will be promptly attended to.

UNION PLATE-GLASS COMPANY,
26, Soho-square, London.

ALFRED GOSLETT, Agent for the Union Plate-Glass Company, begs to inform Architects, Builders, and the Trade generally, that the extension of the Works at Pocket Nook, St. Helen's, Lancashire, being now nearly complete, he is in a position to deliver any quantity of silvering or glazing glass, within one week from date of order. A. Goslett begs to assure the Trade that the present manufacture of the Company cannot be equalled for either quality or brilliancy of colour.

BUILDERS, PAINTERS, GLAZIERS, and others supplied with every article used in the trade upon the best wholesale terms.—Address to R. COGAN, WINDOW GLASS, LEAD, and COLOUR WAREHOUSE, 5 Princes-street, Leicester-square, London, for complete lists, priced, of dry and good Colours, Brushes, Pumps, Closets, Plumber's Brass Work, and all materials.

COLOURED and ORNAMENTAL GLASS of every description at the very lowest prices.

BRITISH and FOREIGN SHEET for Horticultural and all other purposes, as low as any house in the kingdom.

LAMP SHADES AND GAS GLASSES.

Gas Contractors, Fitters, Glass Merchants, and others supplied with any description. Lists of nearly 100 patterns, with prices affixed, sent to any part of the kingdom gratis.

CLOCK MAKERS, ALABASTER FIGURE MAKERS, ARCHITECTS, MODELLERS, and others, supplied with FRENCH ORNAMENT SHADES, for covering Models of Public Buildings, Geological Curiosities, &c., &c., of all sizes and shapes. List of Prices may be had on application. Bee Glasses, Striking Glasses for Nurserymen, Fish Globes and Confectioners' Glasses, &c., of every size and description.

SASH, SHOP-FRONT, AND HOTHOUSE MANUFACTURER.—ESTABLISHED UPWARDS OF 70 YEARS. 87, Bishopsgate-street Without.

THOS. MILLINGTON begs to inform his Friends, that he still continues to manufacture the above in the same manner, and using only the best materials, that have given so much satisfaction for many years past. Every article will be made in the best manner, and the very lowest price charged. Lists may be had upon application. Drawings prepared.

FOREIGN WINDOW GLASS.

THOS. MILLINGTON begs to inform his friends, that he continues to receive weekly large consignments of FOREIGN GLASS, which he is determined to offer upon the very lowest terms. Address, 87, Bishopsgate-street Without.

PLUMBER'S BRASS WORK, WATER-CLOSET PUMPS, &c.—These articles require the greatest attention and care in the manufacture, and will be found superior and cheaper than at any other manufactory. Best Pan Water Closets, 34s.; 2½ Lift Pumps and Planks, 4l. 10s. 0d.; 3-inch Pumps, 5l. 10s. 0d.; ½-inch Bill Ball and Stop Cocks, 30s. per dozen, and every article in this branch equally low. Every article warranted.—Address, THOS. MILLINGTON, 87, Bishopsgate-street.

VARNISH.

THOS. MILLINGTON begs to inform the Trade, Builders, Painters, and others, that this article can be had at his Manufactory, of the best quality and at the very lowest price. T. M. has long been a manufacturer, and has devoted much time and attention to it, using only the best of gums, and sparing no expense in the manufacture. Fine Pale Oak or Wainscoat Varnish, per imperial gallon, 10s.; Fine Carriage Varnish, 12s.; Copal, 18s.; Body Copal, 24s.; Gold Size, 10s; White Hard, 18s.; Brown Hard, 18s.; French Polish, 18s. per gallon. Paint, Dryers, Colours, ready and ground, and every article in the trade. If quality is taken into consideration, this will be found the cheapest house in London. Address, 87, Bishopsgate-street Without.

VARNISH.—It has long been a desideratum amongst the consumers of Varnish to obtain a good and genuine article; brilliancy, facility of drying, hardness, and durability are the qualifications necessary, but these are seldom if ever found united. The experience of a life-time devoted exclusively to the manufacture of this article, the great and important discoveries of modern chemistry, and the daily improvements in machinery, have enabled Messrs. George and Thomas Wallis to produce Varnishes (both oil and spirit) unrivalled in every respect, and they confidently recommend them to the trade, as deserving of notice both in price and quality.

Builders, Coachmakers, Painters, and others may depend on being supplied with a genuine and unadulterated article. Fine Oil Varnish, from 10s. per gallon; best White Spirit Varnish, 21s. ditto; Best Spirit French Polish, 20s. ditto; White Lead, Oil, Turps, and Colours of every description at the very lowest prices.—WALLIS'S Varnish, Japan, and Colour Manufactory, 64, Long-acre, one door from Bow-street. Established 1750.

WALLIS'S PATENT LIQUID WOOD KNOTTING. — This newly-discovered Liquid Composition which Messrs. Geo. and Thos. Wallis have the satisfaction of introducing to the trade, possesses the important qualification of effectually stopping Knots in Wood, however bad, and preventing them eating through and disfiguring the paint above.

Many substances have been used and much time spent in endeavouring to find a cure for a bad Knot, but hitherto without success. Messrs. Wallis therefore feel much pleasure in offering to the public an article so long and anxiously called for.

In the application, skill is not required; a boy can use it as well and effectually as the best workmen: it is put on to the work with a brush like common paint, can be used in all climates and situations, and does not require heat.

Sold wholesale and retail, by Messrs. G. and T. Wallis, Varnish, Japan, and Colour Manufacturers, No. 64, Long Acre. Price 20s. per gallon.

TO ARCHITECTS, ENGINEERS, CONTRACTORS, BUILDERS, MASONS, AND PLASTERERS, MERCHANTS, SHIPPERS, AND THE PUBLIC IN GENERAL.

JOHNS and CO.'S PATENT STUCCO CEMENT.—The following are the positive advantages possessed by this Invention over every Cement hitherto introduced:—It will effectually resist Damp. It will never vegetate nor turn green, nor otherwise discolour. It will never crack, blister, nor peel off. It will form a complete Stone casing to any Building covered with it. It so closely resembles Stone that it is impossible to detect it. It never requires either to be painted or coloured. It will keep fresh and good in the cask in any Climate for any number of years. It is the only Cement that can be depended upon for export. It is the only Cement that can be used with confidence by the Sea-side. It may be used in the hottest or coldest Climates at any season. It will adhere to any substance, even to Wood, Iron, or Glass. It will carry a larger Proportion of Sand than any other Cement. It matures by age, and becomes perfect when other Cements begin to perish. It may be worked through the Winter, as frost has no effect upon it. It may be used on the Inner Walls of new Houses, which may be papered over or painted directly. Roofs laid or pointed with this Cement will remain undamaged by the severest Storms. Any Plasterer may apply it, the Instructions for use being very clear and distinct. The first cost of this material does not exceed that of the cheapest Cement now in use; but with all the above-named extraordinary and valuable advantages, nothing can approach it in point of economy.

Architects and Builders who have used this Cement have declared that it requires only to be known, to be universally preferred.

Specimens may be seen, and a Prospectus fully describing the Cement and its mode of application, together with a volume of Testimonials from every part of the Kingdom, may be obtained on application to MANN and CO., SOLE AGENTS for the Patentees, 5, Maiden-lane, Queen-street, Cheapside, London: of whom also may be had,

JOHNS and CO.'S PATENT STONE-COLOUR STUCCO PAINT, expressly intended for Painting over exterior Walls of Houses that have been covered with Roman or other Cements, and which have become dirty and discoloured. It is in every way better suited for this purpose than White Lead Paint, which will frequently come off in flakes, being in direct chemical opposition with Cement; whereas MESSRS. JOHNS and CO.'S PATENT PAINT having an affinity for Stucco, binds itself with it, stopping the suction, thereby rendering the wall proof against weather, and in the finish producing a pure stone-like effect, producable by no other Paint whatever. It is cheap in its application,—and may be used by any Painter, in any climate, even in the most exposed Marine situations.

TO ENGINEERS, ARCHITECTS, AND CONTRACTORS.

GREAVES'S LIAS CEMENT and GROUND BLUE LIAS LIME, at 2, South Wharf, Paddington, London, and Works, Southam, Warwickshire.

Agent for Liverpool, Mr. WYLIE, 56, Gloster-street; ditto for Manchester, Mr. J. THOMPSON, Back King-street; ditto for Chester, Mr. J. HARRISON, Linen Hall-street.

ATKINSON'S CEMENT.—The public is respectfully informed, that the price of this very excellent Cement, which has now been in use for Architectural and Engineering works upwards of thirty years, is reduced to 2s. 3d. per bushel, and may be had in any quantity at Wyatt, Parker, and Co.'s Wharf, Holland-street, Surrey side of Blackfriars-bridge.

N.B.—This Cement being of a light colour, requires no artificial colouring or painting, and may be used for stucco with three parts its own quantity of sand.

PORTLAND CEMENT, which does not vegetate, and requires no colouring, is perfectly hydraulic, and resists the action of Frost. The cost of the material and of working it is about the same as Atkinson's Cement, Manufactured by J. B. WHITE and SONS, Millbank-street, Westminster, and sold at their Warehouses:—

Druce's Wharf, Chelsea,
Bell's Wharf, Paddington,
Earl-street, Blackfriars,
Albion Wharf, Deptford-bridge,
by Salmon and Co., Dublin,
and at 36, Seel-street, Liverpool.

KEENE'S PATENT MARBLE CEMENT.

WITHOUT noticing CAUTIONS, which are as absurd as they are uncalled for, or disproving assertions, which carry with them their own refutation, the patentees of KEENE'S CEMENT venture to believe, that this material will very advantageously stand the test of comparison with any cement of a similar nature, however INVALUABLE, now before the public. They derive this opinion from its all but exclusive use in the new buildings north of Hyde-park, on the Brompton estate, and in many other public and private edifices, both in London and the country. Amongst others may be mentioned the works recently executed at the Colosseum, Regent's-park, where its hardness and beauty of appearance have caused it to be extensively used for skirting and other mouldings, in place of wood, for columns instead of marble, and as a substitute for stone in paving the floors of the corridors and conservatories.

Patentees and manufacturers, J. B. WHITE & SONS, Millbank-street, Westminster,

MARTIN'S FIRE-PROOF AND ORNAMENTAL CEMENT.

CAUTION.—Messrs. STEVENS and SON, Patentees, beg to caution their friends and the trade generally against confounding this invaluable Cement with others, erroneously said to be of the same description. S. and S. pledge themselves, that MARTIN'S CEMENT is totally dissimilar in composition and manufacture from every other, and, being a neutral compound, is not only free from chemical agency upon any substance with which it may come in contact, but completely resists the action of the strongest acids. They feel it a duty to direct attention to the following properties, which it exclusively possesses:—

1. It rapidly acquires the hardness of stone.
2. Unlike other internal cements, its hardness is uniform throughout its entire thickness.
3. Its surface (which may be made equal to that of the finest marble) NEVER THROWS OUT ANY SALT, and will receive paint in four days, without peeling, when put upon dry work.

It is peculiarly adapted as an internal stucco for walls, skirtings, architraves, mouldings, and enrichments of all kinds, to all of which purposes it has been extensively applied by Mr. Thomas Cubitt on the Grosvenor estate, &c.

For the above purposes, it possesses great advantages over wood, being more economical and durable, resisting fire, damp, and vermin.

For the floors of hall and fire-proof warehouses, its lightness, durability, and uniform surface give it an immense advantage over stone, being, at the same time, much more economical. The most satisfactory references can be given. To be had of the Patentees, Plaster of Paris and Cement Manufacturers, 186, DRURY LANE.

Agent for Liverpool and Manchester, Mr. R. PART, 28, Canning-place, Liverpool.

POLONCEAU'S BITUMEN PAVEMENT for paving Foot walks, Terraces, Garden walks, Stables, Coach Houses, Granaries, Corn Stores, and Salt Warehouses. For the exclusion of Damp and Vermin in Basements it is particularly adapted, and for Roofing Dwelling Houses, Porticos, Balconies, and Sheds.

Price 3s. 6d. per square yard.

BITUMEN for covering the Arches of Bridges, Culverts, &c. &c. on Railways and other places (with instructions for laying it down), may be had at the rate of 45s. per ton, by applying to JOHN PILKINGTON, 15, Wharf-road, City-road.

TO ARCHITECTS.

IN consequence of many complaints having been made to the Company, by Architects, of a spurious material having been used in the execution of Works where the SEYSSEL ASPHALTE had been specified for, the Directors, with a view to ensure the fulfilment of any such specification, have authorized CERTIFICATES to be granted to Builders where the

SEYSSEL ASPHALTE

has been used. For the purpose of securing the use of the Genuine Article, Architects and others are recommended to insert in their specifications the "Seyssel Alphalte, Claridge's Patent," and not merely "Asphalte," or "Bitumen," as in many cases where these terms have been used, gas-tar and other worthless and offensive compositions have been introduced.

I. FARRELL, Secretary.
Stangate, near Westminster Bridge, Jan., 1845. Seyssel Asphalte Company.

Books of Instructions for Use may be had at the Office of "The Builder," and of all Booksellers in Town and Country, price 1s.

*** In proof of the necessity of the above advertisement, it may be mentioned, that it has come to the knowledge of the Directors, that in certain works which have been executed by Messrs. CURTIS, builders, of Stratford, a spurious material has been used by them, contrary to the specifications, which expressly mentioned, that "Claridge's Asphalte" was to be used.

Also in the case of a work at Lewisham executed by Messrs. ROBERT and DANIEL YOUNG, of 10, Crown-row, Walworth-road, where Seyssel Asphalte was specified for, a spurious article was nevertheless laid down by them.